

FLIGHT

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Founder and Editor: STANLEY SPOONER

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"FLIGHT" PHOTOGRAPHS.

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DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:—

1926	
Oct. 2 Second Yorkshire Aeroplane Club Air Pageant, Sherburn.
Oct. 2 28 Squadron (R.A.F.) Old Boys' Association Seventh Re-union Supper, "White Horse," Holborn, London, W.C.2.
Oct. Schneider Cup Race at Norfolk, Virginia, U.S.A.
Oct. Stefanik Prize Race at Prague.
Oct. 24-28 Coppa del Mare, Italy.
Nov. 1-15 Coppa d'Italia, Italy
Dec. 3-19 Paris Aero Show

EDITORIAL COMMENT.



COMPETITION, the regulations for which rule out what is admitted to be the finest two-seater low-power aeroplane in the world is obviously wrong." This comment upon the 1926 Lympne competition for two-seater light 'planes, which has just concluded, represents one point of view, and a point of view for which a very good case can be made out. Last week we ourselves criticised the regulations governing this year's competition, partly on the score that the supremely important question of cost had not been taken into account at all, and partly because, under the regulations as framed, it was left to the discretion of officials to make decisions on a number of points, thus paving the way for endless disputes and not a little dissatisfaction. Concerning the criticism quoted above, this refers, of course, to the stipulation that the engines to be used must not exceed 170 lbs. in weight.

Let us, however, examine for a moment what might have happened if the engine weight had been fixed at 275 lbs. instead of 170 lbs., the other regulations remaining as before. It would then have been perfectly possible for a firm to produce an engine developing a maximum power of 125 to 150 b.h.p. Some of the machines in the competition carried useful loads as high as 12 lbs. per horse-power. If a similar useful power loading had been maintained with the more powerful engine, we should have had machines flying around the course carrying useful loads of up to 1,500 or 1,600 lbs., which would, obviously, have far removed the machines from the class which it is desired to develop. One is thus forced to the conclusion that, so long as load carried per pound of petrol consumed was to be the criterion, the restriction on engine weight was a necessary precaution.

This appears to indicate that the initial choice of load-fuel ratio as the basis is at the root of things. Yet a very good case can be made out for attempting

to encourage, as far as possible, structural as well as aerodynamic efficiency, which this basis definitely does do. Unfortunately, as has been pointed out in these columns repeatedly, extreme efficiency and cost of production are antagonistic one to the other, and the more refined a structure the more expensive it is. Thus in the end we are brought back to the subject of cost, which is, in our view at least, the factor that will mainly govern the future of popular flying.

To us it appears that logically the next step must be a competition in which the rules are designed with the subject of cost as a primary consideration, and that either it must be an engine competition in which competing engines will be required to develop a certain specified power at certain specified *propeller* speeds (so as not to preclude the geared engine), or a competition for machines in which cost is the first consideration, but which have to attain a specified performance. As we enlarged considerably upon this subject last week, we may leave it at that.

Lest it should be thought that we consider this year's competition entirely wasted, we would point out that this is by no means the case. To our way of thinking, it can justly be claimed that, if the competition has done nothing else, it has at least produced one remarkable aeroplane and one very promising engine. The Avro "Avian," with a ratio of total loaded weight to empty weight of 2.3, must be said to mark a very distinct forward step, the more so as the machine combines with this extraordinary ratio a very high top speed, pointing to clean aerodynamic design. Thus in the Grosvenor Cup race the "Avian" averaged, we believe, 97.5 m.p.h., *carrying its full competition load*. It is probable that actually the machine was faster with this load than it would have been with a smaller load. Certainly it would be likely to be more comfortable to fly, since with a lighter load it would have had to fly at a smaller angle of incidence—in other words, would have had to be "held down" all the time. As, for practical purposes, the machine will not be required to carry a useful load of 828 lbs., it would seem that the next step in the conversion of what is admittedly a competition design into a practical aeroplane will be the fitting of slightly smaller wings, when the machine should do at least 105 m.p.h. with a useful load, including pilot, passenger and luggage, of somewhere in the neighbourhood of 400 to 500 lbs. This figure would also allow for strengthening up certain parts which prolonged experience might show to be on the light side for a machine intended for fairly rough usage, as distinct from competition work in the hands of a highly skilled pilot.

Although the Armstrong-Siddeley "Genet" engine did not shine in the competition, it would be a very great mistake to suppose that the engine is not a promising one. Let us examine very briefly the facts concerning it. To begin with, the engine was produced in what must be pretty well record time for a new design. It had to be kept down to a certain specified weight, and in their desire to obtain the maximum power the designers "cut it fine," and it

was found that dual ignition could not be fitted, as the second magneto would have brought the engine to more than the permissible weight by a few pounds only. Obviously, for practical purposes, it matters not in the least whether the engine weighs 169 lbs. or 180 lbs. In the competition, however, it did matter, and there can be little doubt that if dual ignition had been provided neither Broad nor Hinkler would have had their forced landings. The substitution of a steel spindle for the duralumin spindle used for the magneto drive is a very minor matter, and will further increase the reliability of the engine. At the moment pilots report the engine to have a "rough" period at round about 1,500 r.p.m., but this, again, is a matter which can, and doubtless will, easily be put right, so that there is, in spite of the results obtained in the competition, no reason to doubt that the "Genet" will prove a very useful engine.

Concerning the winning machines and engines, the Hawker "Cygnet" and the Bristol "Cherub," the former are two years old, and already in 1924 were realised to be extremely efficient machines, structurally as well as aerodynamically. The ratio of total loaded weight to empty weight of the Hawker "Cygnet" in the competition was approximately 2.1, or nearly as good as that of the "Avian," while this machine is, of course, at "the other end of the scale" in that it is very small and a light 'plane in the original sense of the term, which the "Avian" cannot be said to be. Up to the present the H. G. Hawker Engineering Company has not, as far as we know, contemplated entering the light 'plane market, but it is to be hoped that the recent success at Lympne may result in a reconsideration, and that the "Cygnet" will have successors.

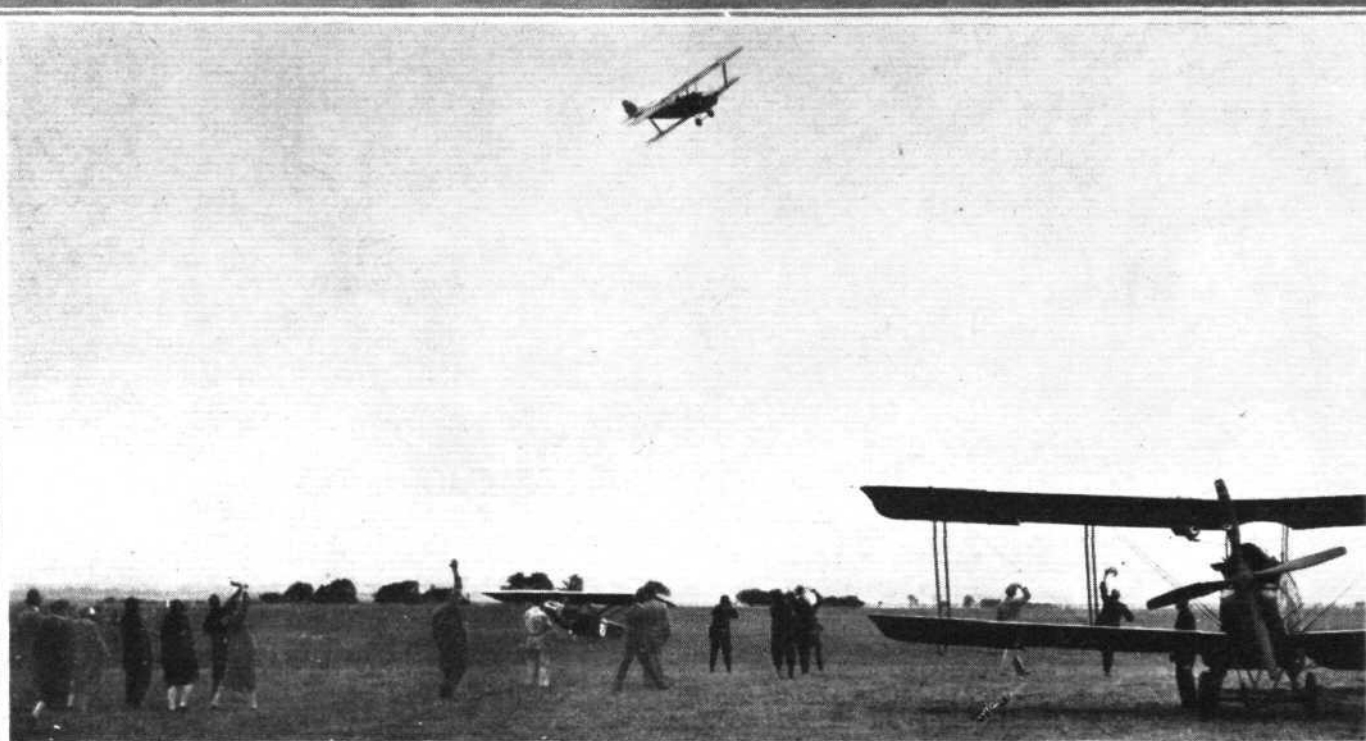
For the Bristol "Cherub" the competition has been an unqualified success. Not only was it the only engine to complete the competition, but, so far as we have been able to ascertain, neither of the four "Cherubs" fitted in the "Brownie," the two "Cygnet" and the "Pixie," gave the slightest trouble throughout the competition. Thus it can justly be claimed that the "Cherub" is now to be regarded as an absolutely trustworthy engine, and at least as reliable as engines of ten times its power.

The position with regard to the "Cherub" is really rather pathetic. Here we have an engine which has now reached a stage of perfection that gives cause for the greatest satisfaction. And yet the trend of modern ideas on the subject of light 'planes is such that it seems almost to have become accepted as a truism that engines of 60 to 70 h.p. are wanted. If that is really the case, it will mean that the "Cherub" is *de trop*. We personally hesitate to adhere unconditionally to that view, and even if the 34 h.p. two-seater is not found to be the right type, surely single-seaters with this power should serve a useful purpose at the clubs, etc., for further practice by those who have already obtained their "ticket," not to mention the possibility of using such low-power single-seaters in the R.A.F. as messengers, for practising and training at low cost, etc.

The Bristol "Cherub" in Germany

MR. EBERHARD VON CONTA, of Bamberg, Germany, who is an owner of a Messerschmitt monoplane fitted with a Bristol "Cherub" Series III engine, has written to the Bristol Aeroplane Co., Ltd., stating that he recently made an altitude flight on this machine and attained an altitude of 5,000 m.

(16,400 ft.)—which includes the height of the aerodrome above sea level, 247 m. (810 ft.). As this was the limit of his recording barograph he did not attempt to fly higher. So far the "Cherub" in this machine has completed 65 hours, and the only adjustment made was the changing of one sparking plug. Within the next week or two Mr. Conta proposes to undertake a flight over the Alps, from Munich to Verona, with a passenger.



["FLIGHT" Photographs]

THE WINNING SMILE : Above, Flight-Lieut. Bulman crossing the finishing line at Lympne as winner of first prize in the "Daily Mail" light 'plane competition. Below, the Hawker "Cygnet" is seen coming to rest, while admirers run out to congratulate "George" on his success. In the centre a group of "Hawkers" in front of the winning "Cygnet." Left to right: Mr. F. Sigris, Mr. Hayward, Lieut. Bulman, Mr. Peaty, Mrs. Bulman and Mr. Jones.

LYMPNE COMPETITION 1926



SHORTLY after three o'clock on the afternoon of Friday, September 17, Flight-Lieut. P. W. S. Bulman crossed the finishing line at Lympe Aerodrome as winner of the *Daily Mail* competition for two-seater light 'planes, having covered the total distance of 1,994 miles in a total flying time of 30 hours 41 mins. 15 secs., or at an average speed of 64.98 m.p.h. (104.6 km./h.).

The fact that during the last two days of the competition only four machines were left, did not tend to make for intense excitement, the more so as the relative position of these four remained unchanged, so that it may be said that from the morning of Wednesday, September 15, up to the end of the competition, the result was more or less a foregone conclusion, barring accidents resulting in the retirement of one or more of the remaining four machines.

Up to the time of the elimination of the Avro "Avian" the final issue had been somewhat in doubt, but by the time Hinkler was compelled to abandon, it had become quite obvious that the Hawker "Cygnets," with Bristol "Cherub" engine, would, barring accidents, retain its leading position to the end. The winning machine was, it will be recollected, designed and built for the 1924 Lympe competition, in which two of this type took part. It may also be recollected that the one flown by Raynham had engine failure during the last lap, otherwise there is quite a possibility of the first prize having gone to this machine instead of to the Beardmore "Wee Bee." Already when the two "Cygnets" were first produced by the H. G. Hawker Engineering Co., it was obvious that the machine possessed quite exceptional merit from the point of view of low structural weight, and this feature, combined with the clean aerodynamic design and the relatively large useful load carried, enabled the machine to win first place in this year's competition. In this connection the part which the pilot must necessarily play in the final results should not be overlooked. Flight-Lieut. Bulman is generally admitted to be one of the finest British pilots of to-day, and

there can be no doubt that his handling of the machine, his nursing of the engine, his excellent course keeping, and that sixth sense which tells a pilot which is the most economical cruising speed for any given wind condition, contributed to a very large extent to the success of the Hawker "Cygnets" in this year's competition.

A few figures concerning the winning machine may be of interest. The Hawker "Cygnets" as flown in the competition had an empty weight of 421 lb., and carried a useful load in the competition of 430 lb., while the weight of the fuel and oil carried was 49 lb., bringing the total loaded weight up to 900 lb. In carrying this load over the total distance of 1,994 miles, Bulman used 388.823 lb. of petrol, so that his economy figure was 2,203 lb.-miles per lb. of fuel. Taking petrol at 7.6 lb. per gallon, which appears to be the figures used officially at Lympe, for the weight of petrol, and not 7 lb. per gallon, which was the figure used in our special supplement to the September 9 issue of *FLIGHT*, this represents 7.47 ton-miles per gallon. On the same basis, the best of the 1923 single-seaters did 1,875 lb.-miles per lb., or 6.35 ton-miles per gallon, so that it will be seen that on this basis a two-seater Hawker "Cygnets" is considerably more efficient than were the 1923 single-seaters, the best of which did 87.5 miles to a gallon of petrol, but which carried no useful load other than the pilot. Bulman's mileage in this year's competition was 39 miles per gallon of petrol, which compares favourably with the mileage of a two-seater motor-car, and the useful load carried (430 lb.) corresponds to two people weighing 170 lb. each, and 90 lb. of luggage, &c., while the fuel carried was sufficient for probably somewhere between 125 miles and 150 miles.

The second best figure attained in the Economy Competition was secured by the Hawker "Cygnets" entered by the R.A.E. Aero Club, of Farnborough. This machine was presented by Mr. Sopwith and Mr. Sigrist to the Farnborough Club about a year ago, and has now been the means of winning



["FLIGHT" Photograph]

THE FARNBOROUGH TEAM (Second in Competition): Left to right, E. Brame, S. O. Smith, Manning Harris, F.O. Ragg, Flight-Lieut. Chick, G. N. G. Peters, W. Baker, and the "Flying Marshal," Mr. Preston.

"DAILY MAIL" LIGHT 'PLANE COMPETITION RESULTS

	Machine →	No. 2.	No. 3.	No. 4.	No. 6.	No. 9.	No. 10.	No. 14.	No. 16.
Sunday, Sept. 12. Lympe-Brighton-Lympne. 104 × 3 = 312 miles. For 1 day.	Useful load, lbs. . .	700	340	362	430	828	340	340	340
	Lap 1, m.p.h. . .	57.71	49.25	50.14	60.55	69.49	49.67	38.19	49.20
	Lap 2, m.p.h. . .	71.34	56.50	56.86	63.54	67.19	53.49	61.03	56.08
	Lap 3, m.p.h. . .	72.04	59.03	53.32	61.78	69.65	50.74	59.16	55.57
	Total time, h.m.s. . .	4.42.12	5.42.51	5.51.12	5.2.15	4.32.15	6.5.15	6.11.5	5.50.22
	Average speed, m.p.h. . .	66.34	54.60	53.30	61.93	68.75	51.25	50.44	53.43
	Petrol consumed lb. . .	143.5	70	60	61	121	78	75	99
	Figure of Merit . . .	4.87	4.86	6.03	7.05	6.84	4.36	4.53	3.43
	Pound-miles/lb. . .	1,520	1,515	1,885	2,200	2,133	1,360	1,415	1,061
	Position . . .	4	5	3	1	2	7	6	8
Monday, September 13. Lympe-Eastbourne-Lympne-Hastings-Lympne. 122 × 3 = 366 miles. For 2 days.	Lap 1, m.p.h. . .	75.88	62.08	59.71	64.38	69.64	59.31	61.26	57.27
	Lap 2, m.p.h. . .	73.82	61.73	56.56	69.20	74.23	—	61.99	61.19
	Lap 3, m.p.h. . .	75.47	60.30	57.58	66.62	65.88	Disq.	61.37	53.43
	Time for 366 miles . .	4.52.36	5.57.53	6.19.6	5.29.20	5.14.50	—	5.56.50	6.24.26
	Average speed over 366 miles . .	75.05	61.36	57.92	66.68	69.75	—	61.54	57.12
	Time for 678 miles . .	9.34.48	11.40.44	12.10.18	10.31.35	9.47.5	—	12.7.55	12.14.48
	Average speed over 678 miles . .	70.77	58.05	55.70	64.41	69.29	—	55.88	55.36
	Petrol consumed lb. . .	298	141	135.5	128.8	265.5	—	158.8	206
	Figure of Merit . . .	2.35	2.41	2.67	3.34	3.12	—	2.14	1.65
	Pound-miles/lb. . .	1,592	1,635	1,810	2,320	2,116	—	1,452	1,120
Tuesday, September 14. Lympe-Dover-Manston-N. Foreland-Reculvers-Lympne. 66 × 6 = 396 miles. For 3 days.	Lap 1, m.p.h. . .	74.02	58.78	58.78	64.25	76.87	—	61.21	61.83
	Lap 2, m.p.h. . .	75.45	59.77	57.91	66.15	75.50	—	62.28	14.88
	Lap 3, m.p.h. . .	77.39	62.15	58.74	67.61	80.19	—	62.41	61.97
	Lap 4, m.p.h. . .	77.27	62.25	57.78	69.39	80.35	—	63.16	61.92
	Lap 5, m.p.h. . .	80.49	62.54	60.53	69.96	80.87	—	61.00	62.36
	Lap 6, m.p.h. . .	81.25	65.02	60.08	71.05	78.29	—	62.15	60.07
	Time for 396 miles . .	5.6.21	6.25.10	6.43.3	5.49.28	5.2.11	—	6.23.4	9.47.22
	Average speed over 396 miles . .	77.56	61.69	58.96	67.98	78.63	—	62.02	40.45
	Time for 1,074 miles . .	14.41.9	18.5.54	18.53.21	16.21.3	14.49.16	—	18.30.59	22.2.10
	Average speed over 1,074 miles . .	73.13	59.34	56.86	65.68	72.46	—	58.00	48.73
Wednesday, Sept. 15. Lympe-Brighton-Lympne. 104 × 3 = 312 miles. For 4 days.	Lap 1, m.p.h. . .	14.05	59.01	54.03	56.32	75.91	—	54.16	—
	Lap 2, m.p.h. . .	74.43	57.20	43.48	55.41	72.22	—	53.08	—
	Lap 3, m.p.h. . .	77.92	51.71	47.78	57.35	Disq.	—	54.34	—
	Time for 312 miles . .	10.8.1	5.35.29	6.29.33	5.32.12	—	—	5.47.34	—
	Average speed over 312 miles . .	30.79	55.80	48.05	56.35	—	—	53.86	—
	Time for 1,386 miles . .	24.49.10	23.41.23	25.22.54	21.53.15	—	—	24.18.33	—
	Average speed over 1,386 miles . .	55.84	58.50	54.61	63.32	—	—	57.01	—
	Petrol consumed, lb. . .	593	288	278	272	—	—	369.5	—
	Figure of merit . . .	1.18	1.18	1.30	1.58	—	—	0.92	—
	Pound-miles/lb. . .	1,635	1,635	1,805	2,195	—	—	1,275	—
Thursday, September 16. Lympe-Dover-Manston-North Foreland-Reculvers-Lympne. 66 × 6 = 396 miles. For 5 days.	Lap 1, m.p.h. . .	Disq.	65.74	59.38	66.83	—	—	64.44	—
	Lap 2, m.p.h. . .	—	66.33	60.02	69.82	—	—	65.58	—
	Lap 3, m.p.h. . .	—	61.16	60.44	70.40	—	—	64.88	—
	Lap 4, m.p.h. . .	—	62.61	60.71	71.48	—	—	63.05	—
	Lap 5, m.p.h. . .	—	62.20	60.15	70.99	—	—	64.83	—
	Lap 6, m.p.h. . .	—	59.38	56.64	67.65	—	—	61.86	—
	Time for 396 miles . .	—	6.18.17	6.39.10	5.41.56	—	—	6.10.46	—
	Average speed over 396 miles . .	—	62.81	59.55	69.48	—	—	64.08	—
	Time for 1,782 miles . .	—	29.59.40	32.2.4	27.35.11	—	—	30.29.19	—
	Average speed over 1,782 miles . .	—	59.41	55.63	64.59	—	—	58.45	—
Friday, September 17. Lympe-Croydon-Lympne. 106 × 2 = 212 miles. For 6 days.	Lap 1, m.p.h. . .	—	62.63	60.62	68.42	—	—	63.63	—
	Lap 2, m.p.h. . .	—	62.03	52.30	68.31	—	—	63.29	—
	Time for 212 miles . .	—	3.24.5	3.46.31	3.6.4	—	—	3.20.26	—
	Average speed over 212 miles . .	—	62.33	56.15	68.36	—	—	63.46	—
	Time for 1,994 miles . .	—	33.23.45	35.48.35	30.41.15	—	—	33.49.45	—
	Average speed over 1,994 miles . .	—	59.71	55.68	64.98	—	—	58.94	—
	Petrol cons'd. lb. . .	—	402.09	398.89	388.83	—	—	439.88	—
	Figure of merit . . .	—	0.850	0.907	1.105	—	—	0.77	—
	Pound-miles/lb. . .	—	1,687	1,808	2,203	—	—	1,541	—
	Position . . .	—	3	2	1	—	—	4	—

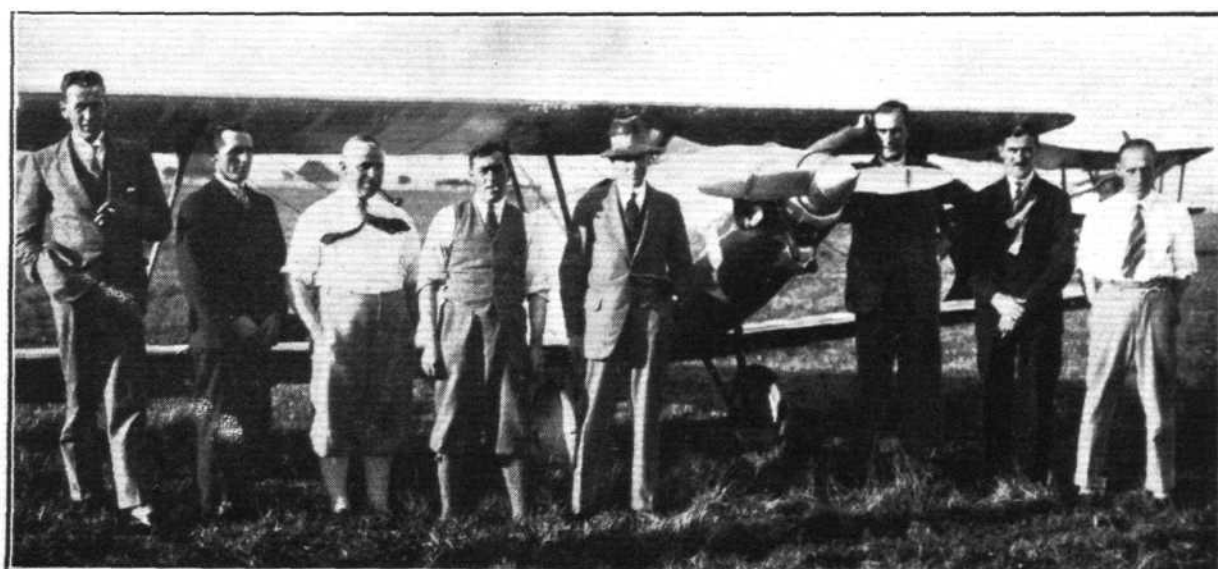
* Disq. = Disqualified. No. 2 D.H. "Moth" ("Genet"); No. 3 Bristol "Brownie" ("Cherub"); No. 4 Farnborough Hawker "Cygnet" ("Cherub"); No. 6 Hawker "Pixie" ("Cherub"); No. 9 Avro "Avian" ("Genet"); No. 10 Avro "Avis" ("Thrush"); No. 14 Parnall "Cygn" ("Cherub"); No. 16 Westland "Woodpigeon" ("Scorpion").



THE BRISTOL TEAM : From left to right, standing, F. Mayer, R. Fedden, F. Uwins, and A. Suddes. Seated, W. Allen, F. Chard, and F. Godfrey.



THE PARNALL TEAM : Left to right, J. Smith, J. W. Copley, H. Bolas (designer), F. Courtney (pilot), T. Healey, W. Lane, and D. Twose.



THE CRANWELL TEAM : Left to right, Flight-Sergt. Hammond, Flight-Sergt. McKeown, F.O. Cashmore, Flight-Lieut. Pack, Flight-Lieut. Comper (designer and pilot), Flight-Lieut. Walmesley, (pilot), Flight-Lieut. George, and F. O. Herbert.

["FLIGHT" Photographs]



[“ FLIGHT ” Photograph]

THE DE HAVILLAND TEAM : From left to right, H. Cantrill, R. Brant, E. Mitchell, Capt. de Havilland, W. Hales (Armstrong-Siddeley), and Capt. H. Broad.

for the Club the *Daily Mail* second prize of £1,500. This windfall should help to set the Club firmly on its feet financially, and we may now look forward to “home-made” machines of original design. Perhaps, one of the first results may be the location of the whereabouts of the c.g. of the “Sirocco,” which, it is rumoured, has been playing hide and seek in the fuselage. The “Cygnet” entered by the Farnborough Club, differs not at all, externally, from the Hawker “Cygnet,” but its empty weight in the competition was 431 lb., and the useful load carried was somewhat smaller, i.e., 362 lb., while the weight of petrol and oil carried was 57 lb., giving a total loaded weight of 850 lb. The amount of petrol consumed for the total distance of 1,994 miles was 398.891 lb., giving a figure of merit of 0.907 and an economy of 1,808 lb.-miles per lb. of petrol. Expressed otherwise, this corresponded to 6.13 ton-miles per gallon of petrol. The total flying time of this machine was 35 hours 48 mins. 35 secs., corresponding to an average speed of 55.68 m.p.h.

Third in the competition was No. 3, the Bristol “Brownie,” piloted by Mr. Uwins. This low-wing monoplane had an empty weight of 623 lb., carried a useful load of 340 lb., and 47 lb. of petrol and oil, giving a total loaded weight of

1,010 lb. Uwins’ total flying time was 33 hrs. 23 mins. 45 secs., corresponding to an average speed of 59.71 m.p.h. The amount of petrol consumed for the 1,994 miles was 402.094 lb., giving a figure of merit of 0.85 and an economy of 1,687 lb.-miles per lb. of petrol, corresponding to a mileage of 5.72 ton-miles per gallon of petrol.

The fourth machine to finish the complete course of the competition was No. 14, the Parnall “Pixie,” piloted by Courtney. This machine weighed, empty, 522 lb., and carried a useful load of 340 lb. and 63 lb. of petrol and oil, giving a loaded weight of 925 lb. Its petrol consumption for the total distance was 439.88 lb., giving a figure of merit of 0.77 and an economy of 1,541 lb.-miles per lb. of petrol, which is equivalent to 5.22 ton-miles per gallon. The total flying time was 33 hrs. 49 mins. 45 secs., representing an average speed of 58.94 m.p.h.

The Amazing “Cherub”

It is worthy of note that the Bristol “Cherub,” Mark III, was fitted in all the machines which finished the complete course, and that it gave practically no trouble at all. Thus the engine in Bulman’s winning “Cygnet” never had a



IN THE ENCLOSURES : A corner of the motor-car park.

[“ FLIGHT ” Photograph]

spanner put to it throughout the competition, and when stripped in public at the end of the competition was found to be in such perfect condition that it could be put back in the machine *without a single replacement*. This was actually done, and the engine went through the Grosvenor Cup Race and the Lympne Open Handicap without any trouble of any kind. Considering that this engine had already done something like 31 hours' flying in the competition, probably a couple of hours more in the eliminating tests, plus several hours at Brooklands before the competition, the fact that at the end of it all, it should be able to stand up to 125 miles at full throttle without giving any trouble is surely proof positive that the "Cherub" is now at least as reliable as any high-powered aero engine. More than that there does not appear to be any need to say.

Those that Fell by the Way

Having referred briefly to the four machines which completed the entire course of 1,994 miles, a few words concerning those which, for one reason or another, fell out during the actual competition may be of interest.

No. 10, the Avro "Avis," piloted by Wing-Commander Sholto Douglas, and which was fitted with a Blackburne

2,093 lb.-miles per lb. of petrol, or 7.1 ton-miles per gallon. This was, of course, distinctly good, and but for the trouble with a leaky petrol tank the "Avian" might have been a dangerous competitor of the "Cygnet." However, it passed out of the competition by the breaking of its duralumin magneto driving shaft, which resulted in a forced landing near Iford hill in the Lewes district on the third lap of the fourth day's flying. Repairs could not be made in time for the machine to complete the day's circuit.

The last machine to fall out was No. 2, the De Havilland "Moth" with Armstrong-Siddeley "Genet" engine, piloted by Capt. Broad. On the first lap of the fourth day's flying exactly the same trouble as that which befell Hinkler overtook Broad, *i.e.*, the magneto driving shaft broke and necessitated a somewhat hurried forced landing. Broad put down the machine safely, but by the time a fresh driving shaft could be rushed out to him and put in, in place of the broken one, so much time had elapsed that Broad's average speed over this lap was 14.05 m.p.h., the time spent in repairs being, of course, counted as flying time. However, the repairs were ultimately effected and the machine was removed to another field, as the one in which the landing had been made was too small to make a start possible. The machine returned to



["FLIGHT" Photographs]

IN PERFECT CONDITION: At the end of the "Daily Mail" Competition the Bristol "Cherub" of the winning Hawker "Cygnet" was removed from the machine and stripped in public for everyone to see. The condition of the engine was perfect, and not a single part had to be replaced before the engine was put back to take part in the Grosvenor Cup Race. Our photographs show the engine being stripped and, on the right, Major Bulman (of the R.A.E.) calibrating a cylinder.

"Thrush" engine, had flown 508 miles and consumed 108 lb. of petrol. As the useful load was 340 lb. the economy of this machine was 1,599 lb.-miles per lb. of fuel, or 5.45 ton-miles per gallon. The reason why this machine fell out was that in a forced landing on the return flight of the second lap on the second day's circuit the undercarriage was damaged and Douglas was unable to effect the necessary repairs.

Next to fall out was No. 16, the Westland "Woodpigeon," with A.B.C. "Scorpion" engine. The reason was that on the second lap of the third day's flying a rocker arm seized, necessitating a forced landing. Repairs took so long that the machine's average speed for that lap was 14.88 m.p.h., the time spent in repairs near Canterbury being, of course, counted as flying time. Although a plucky attempt was afterwards made to complete the day's flying, the machine arrived at Lympne 48 secs. after 8 p.m., the official closing time. The machine had flown 1,008 miles and used 334 lb. of petrol. As the useful load was 340 lb. the economy was 1,028 lb.-miles per lb. of petrol, or 3.49 ton-miles per gallon.

A machine which started the competition as a strong favourite was No. 9, the Avro "Avian," with Armstrong-Siddeley "Genet" engine. With a useful load of 828 lb., this machine covered 1,282 miles before being eliminated, and in that distance used 507 lb. of petrol, so that its economy was

Lympne and, after filling up, completed the remaining distance for the day. Upon examining the lead weights which formed part of the useful load, it was found that a slab weighing some 17 lb. was missing, which fact caused Broad to be disqualified. It is thought that in transferring the lead weights from the small field to the larger one this weight may either accidentally have been left behind in the grass or may have been taken away by someone who wanted a "souvenir."

Up to the time of his disqualification Broad had covered 1,386 miles and had used 592.24 lb. of petrol. As his useful load was 700 lb., the economy of this machine worked out at 1,638 lb.-miles per pound of petrol, or 4.7 ton-miles per gallon.

The Competition in Figures

On page 613 will be found a table giving very detailed particulars of the speeds, consumptions, figures of merit, and economy of the various machines. The table is self-explanatory, but it should be pointed out that a number of the figures are not official ones, and that in many instances figures for weight of petrol consumed on any particular circuit have been calculated from the official figures of merit and the useful loads which the machines were known to carry. The very low average speeds for one lap each of the



["FLIGHT" Photograph]

Flight-Lieut. Comper winning the Stewards' Handicap on the Cranwell C.L.A.4 (Bristol "Cherub"). Average speed 70.85 m.p.h.

"Moth" and the "Woodpigeon" are due to the time spent in effecting repairs being counted as flying time. It should also be pointed out that for those who prefer to state the economy of a machine in ton-miles per gallon rather than in pound-miles per pound, this can be done by dividing the latter figures by 295. This is on the assumption that petrol weighs 7.6 lb. per gallon, which was, we understand, the figure used officially at Lympne.

The final figures for petrol consumed include a deduction for the quantity of petrol left in the tanks at the finish, competitors being credited with this amount.

Competition Diary Continued

In last week's issue of FLIGHT we gave a day-to-day account of the competition up till the evening of Tuesday, the 14th. Below we continue this account.

Lympne Aerodrome, Wednesday, September 15.—The weather to-day proved a serious obstacle to the progress of the six competitors still remaining in the competition. A very strong wind was blowing, which was of a very gusty nature and was estimated to reach at times a velocity of 45 to 50 m.p.h. The Lympne-Brighton-Lympne course of 104 miles is a very difficult one, inasmuch as the hills in the Lewes district, our old friends Firle Beacon and Itford Hill among them, with the wind in that direction, caused some severe down-draughts which some of the machines had considerable difficulty in overcoming, and one pilot described

graphically how he had the somewhat terrifying experience of opening his throttle fully and climbing the machine as fast as it would go, yet rapidly losing height all the time. The effect of the wind had, of course, considerable influence not only on the speeds, which are relatively unimportant, but also on the fuel consumptions during the day, but, in spite of the very bad weather conditions, five out of the six machines completed the total course of 312 miles. The only machine which failed was the Avro "Avian," piloted by Hinkler, which broke a magneto spindle which could not be repaired in time for the machine to complete the course. Broad on the De Havilland "Moth" had the same trouble in his first lap, but was able to get the damaged spindle replaced and to complete the two remaining circuits. At the end of the day's flying, however, it was discovered that a lead weight weighing some 17 lb. was missing from the machine, and as the absence of this weight must have dated back to the forced landing in the Lewes district, Broad was ruled out of the competition.

The figures of merit for the day, which are for a total of 1,386 miles, were: No. 6, Hawker "Cygnet" 1.58; No. 4, Farnborough Hawker "Cygnet," 1.30; No. 3, Bristol "Brownie" 1.18; No. 2, De Havilland "Moth" 1.18; and No. 14, Parnall "Pixie III" 0.92. Thus Bulman still retains the lead which he has held throughout.

Lympne Aerodrome, Thursday, September 16.—The retirement of Broad and Hinkler yesterday reduced the number of

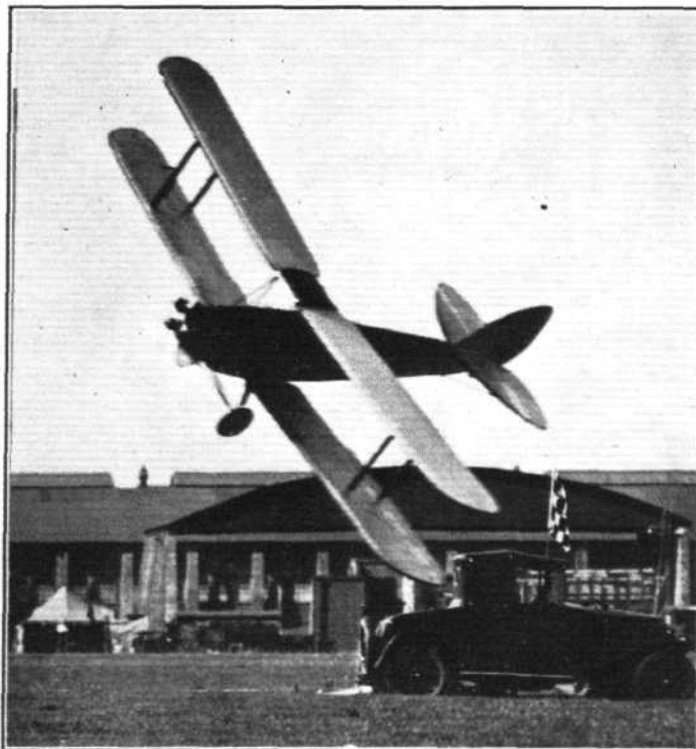


["FLIGHT" Photograph]

LINE UP FOR THE S.M.M.T. RACE: From left to right the machines are: de Havilland "Moth" Avro "Avian," Farnborough "Cygnet," Parnall "Pixie," and Bristol "Brownie." This race was won by Hinkler on the Avro "Avian," at an average speed of 90 m.p.h.

competitors left to four: No. 3, the Bristol "Brownie"; No. 4, the Farnborough "Cygnets"; No. 6, the Hawker "Cygnets"; and No. 14, the Parnall "Pixie." The course today was Lympne—Dover—Manston—North Foreland—Reculvers—Lympne, one of 66 miles, which had to be covered six times, giving a total mileage for the day of 396 miles. First to get away was Uwins on the Bristol "Brownie," who left about five minutes past eight, followed five minutes later by Chick on the Farnborough "Cygnets." Bulman got away on the Hawker "Cygnets" about 13 minutes past eight, followed half-a-minute later by Courtney on the "Pixie." The weather was kind to the competitors today, and all four machines had finished their day's flying by 5 p.m. The day was quite uneventful, and at the end of the day's flying the following figures of merit had been attained: No. 6, 1.24; No. 4, 1.03; No. 3, 0.93; and No. 14, 0.86. Thus, the relative position of the four machines remains unaltered and this position is liable to remain unchanged to the finish.

Lympne Aerodrome, Friday, September 17.—The course today was from Lympne to Croydon and back twice, a total distance of 212 miles. Mist and low clouds rendered the visibility extremely poor during the early morning, and although Courtney was anxious to get away on the "Pixie," the officials prohibited any flying until the visibility improved. By about 10.20 a.m., however, there was a slight improvement, and permission was given for Courtney to start. Getting away at about half-past 10, he was soon lost sight of in the haze. The other competitors waited for a further improvement in the weather, but as it seemed doubtful if this could be counted upon, they started at short intervals, the first to get away (at about 11.23) being Bulman on No. 6, who was followed about 30 seconds later by Uwins on the "Brownie." Chick, on the R.A.E. "Cygnets," got away last, at about 11.25. Courtney returned from his first circuit at 8 minutes past 12, and reported that conditions, although



["FLIGHT" Photograph
Capt. Broad cornering on the de Havilland "Moth" with "Genet" engine in the S.M.M.T. Race. Average speed 94.75 m.p.h.

on the Bristol "Brownie," was third, thus winning the third prize of £500.

The "Eliminated"

In the afternoon was held the race for the "eliminated," in other words, the race for the Stewards' Prize. This consisted of two laps of the Lympne-Postling-Hastingleigh circuit, a total distance of 25 miles. Entered for it were the following machines, with the following handicap allowances: No. 1, the Blackburn "Bluebird," scratch; No. 13, the A.N.E.C. "Missel-Thrush," 2 mins. 20 secs.; No. 10, the Avro "Avis," 2 mins. 39 secs.; No. 7, the Supermarine "Sparrow III," 3 mins.; and No. 12, the Cranwell C.L.A.4, 4 mins. 5 secs. This race was won easily by Comper on the Cranwell, who maintained his lead throughout. Upon finishing the race he flew out over the marshes, where his engine was heard to splutter and he was seen to descend. It was later found that a fly had got into his carburettor.

["FLIGHT" Photograph

Winning the S.M.M.T. Race: Hinkler on the Avro "Avian" with Armstrong-Siddeley "Genet" engine won this race at an average speed of 90 m.p.h.

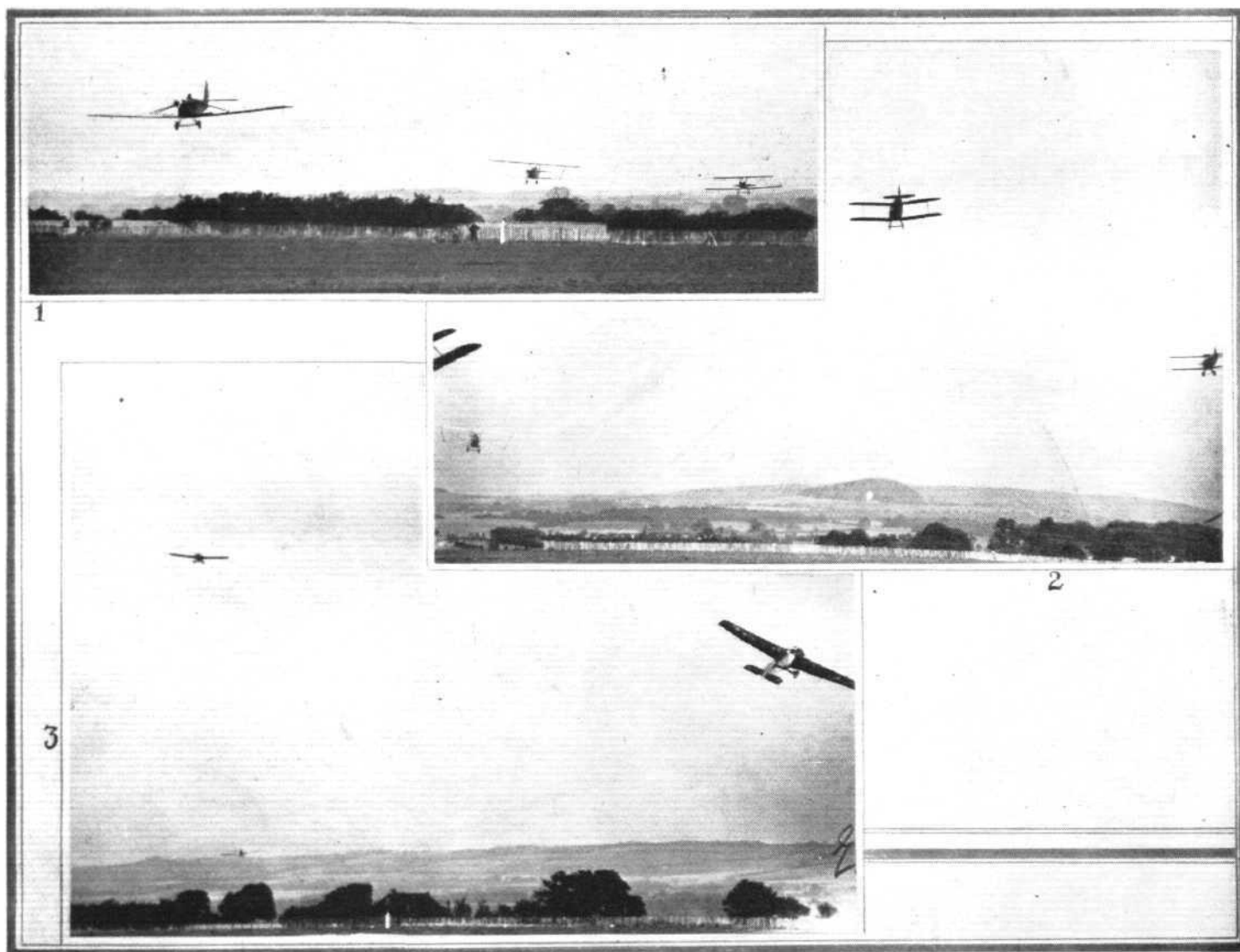


Saturday, September 18

Three races were scheduled for Saturday, by way of ending up the meeting. The first of these was that for the prize of 200 guineas offered by the Society of Motor Manufacturers and Traders. This was open to competition machines which had completed at least 50 per cent. of the total distance. The course was one of 75 miles (six laps of the Lympne circuit). Five machines faced the starter, the machines and their handicap allowances being: No. 3, the Bristol "Brownie," 16 mins. 31 secs.; No. 14, the Parnall "Pixie III," 13 mins. 8 secs.; No. 4, the Farnborough "Cygnet," 11 mins. 34 secs.; No. 9, the Avro "Avian," 5 mins. 28 secs.; No. 2, the de Havilland "Moth," scratch. The Avro "Avian," piloted by Hinkler, proved an easy winner, his average speed for the course being 90 m.p.h. Uwins on the "Brownie" was second, average speed 71.5 m.p.h., and Broad third on the

G-EBHZ, the de Havilland 53, and G-EBJM, the Bristol "Brownie" single-seater, 14 mins. 31 secs.; No. 13, the A.N.E.C. "Missel-Thrush," No. 6, the Hawker "Cygnet," and No. 1, the Blackburn "Bluebird," 13 mins. 6 secs.; G-EBHS, the R.A.E. "Hurricane," 11 mins. 46 secs.; G-EBMJ, the Short "Mussel," 9 mins. 53 secs.; G-EBKT, Mrs. Elliott-Lynn's "Moth," 8 mins. 7 secs.; G-EBME, de Havilland "Moth," 7 mins. 33 secs.; G-EBMO, "Moth" with "Cirrus II" engine, and G-EBMC, the Cranwell C.L.A.3 monoplane, 4 mins. 55 secs.; No. 9, the Avro "Avian," 4 mins. 25 secs.; G-EBNO, Capt. de Havilland's "Moth" with "Cirrus II" engine, 3 mins. 28 secs.; No. 2, Broad's "Moth" with "Genet" engine, 3 mins.; and G-EBJT, the Westland "Widgeon," "Genet" engine, scratch.

With this number of machines in the race, there was considerable "bunching" at the turning points, and from this



[“FLIGHT” Photographs]

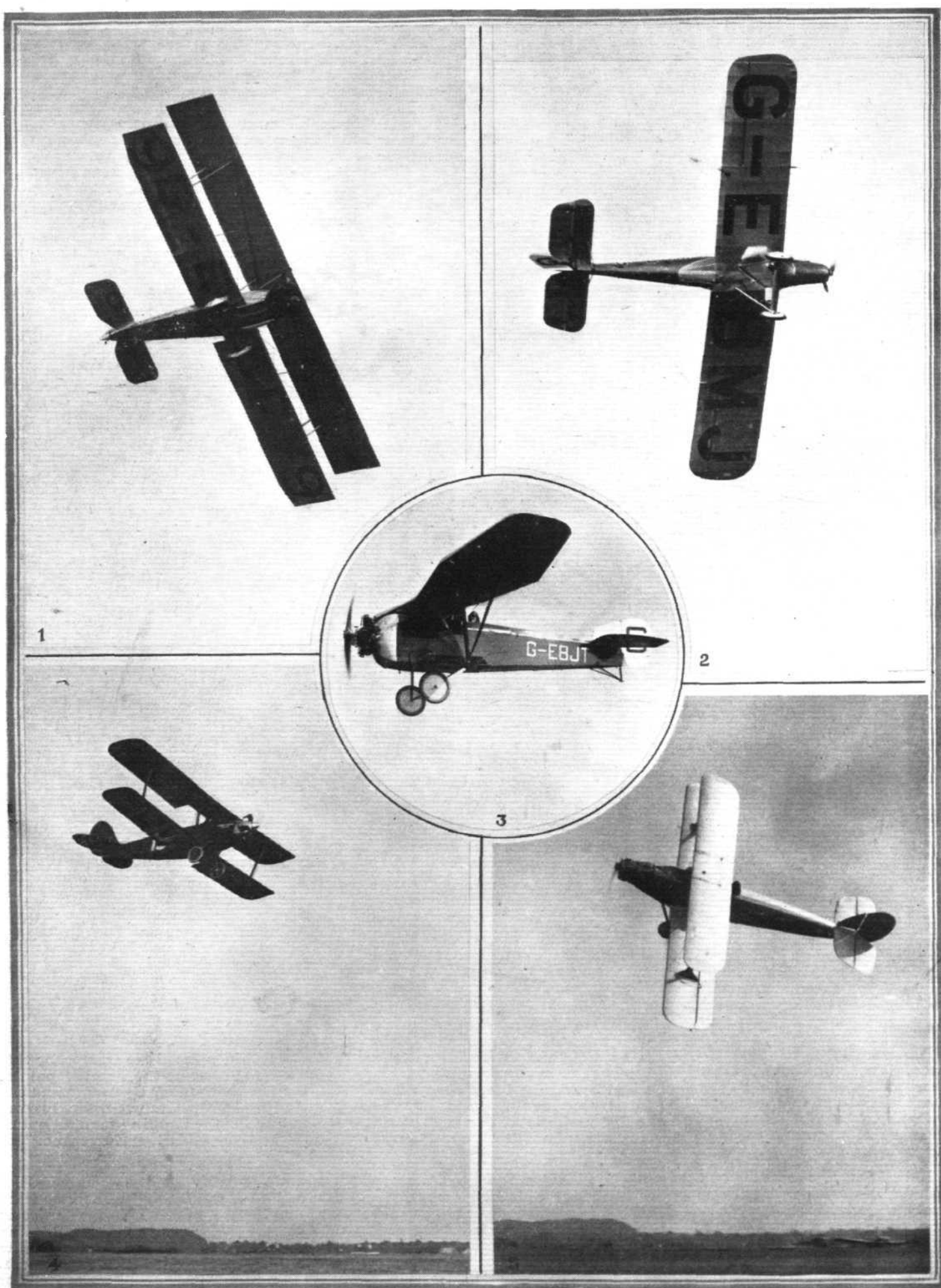
THE RACE FOR THE GROSVENOR CHALLENGE CUP: No less than 21 machines faced the starter for this race, a record number. The result was that machines frequently got bunched together at the turning points. Our photographs show some such incidents. In 1 are seen the D.H. 53, the Farnborough "Cygnet," and the Cranwell biplane approaching the aerodrome turning point. 2, shows the wing tips of the Cranwell, the Hawker "Cygnet," the Blackburn "Bluebird," and one of the D.H. "Moths" heading for the Postling turning point, while in 3 may be recognised the Short "Satellite," the Parnall "Pixie" and the R.A.E. "Hurricane."

"Moth," average speed 94.75 m.p.h. Considering that Hinkler was flying with full competition load, his speed was really remarkable.

The Grosvenor Cup Race

No less than 21 machines faced the starter for the race for the challenge cup presented by Lord Edward Grosvenor (75 miles) and prizes, totalling £100, presented by Sir Charles Wakefield, Bt. The machines and their handicap allowances were: No. 10, the Avro "Avis," 24 mins. 43 secs.; No. 7, the Supermarine "Sparrow II," 23 mins. 44 secs.; No. 14, the Parnall "Pixie," 19 mins. 12 secs.; No. 12, the Cranwell biplane, and No. 4, the Farnborough "Cygnet," 15 mins. 59 secs.; No. 15, the Short "Satellite," 15 mins. 15 secs.

point of view the race was probably the best we have had for the last seven years. It was, however, difficult to keep track of so many machines and to know on which lap any particular one was when rounding the aerodrome turning point. The race was won easily by Squadron-Leader Longton on the Blackburn "Bluebird," whose speed was 84.95 m.p.h. Second was Courtney on the Parnall "Pixie," whose speed was 75.18 m.p.h., and third Chick on the R.A.E. "Hurricane," average speed 84.79 m.p.h. Capt. de Havilland landed at Lympne after completing his first lap, his engine having given trouble. Col. Henderson also landed on the "Missel-Thrush," as did also Comper on the Cranwell monoplane, his propeller having been bent by a small boy while the machine was in the shed. The only other "casualty" was Lankester Parker



["FLIGHT" Photographs]

"BANKING ACCOUNTS" AT LYMPNE: 1 shows the Avro "Avian" in the Grosvenor Handicap. 2. Mr. Lankester Parker stands the Short "Mussel" on its wing tip in the same race. 3. The Westland "Widgeon" started scratch in the Grosvenor Race. 4. Col. Henderson on No. 13, the A.N.E.C. "Missel-thrush," in the Grosvenor Race. 5. Lieut. Walmesley rounding the aerodrome turning point on the Cranwell biplane.

who made a forced landing out in the country on the Short "Mussel," without doing any damage.

The Lypne Open Handicap

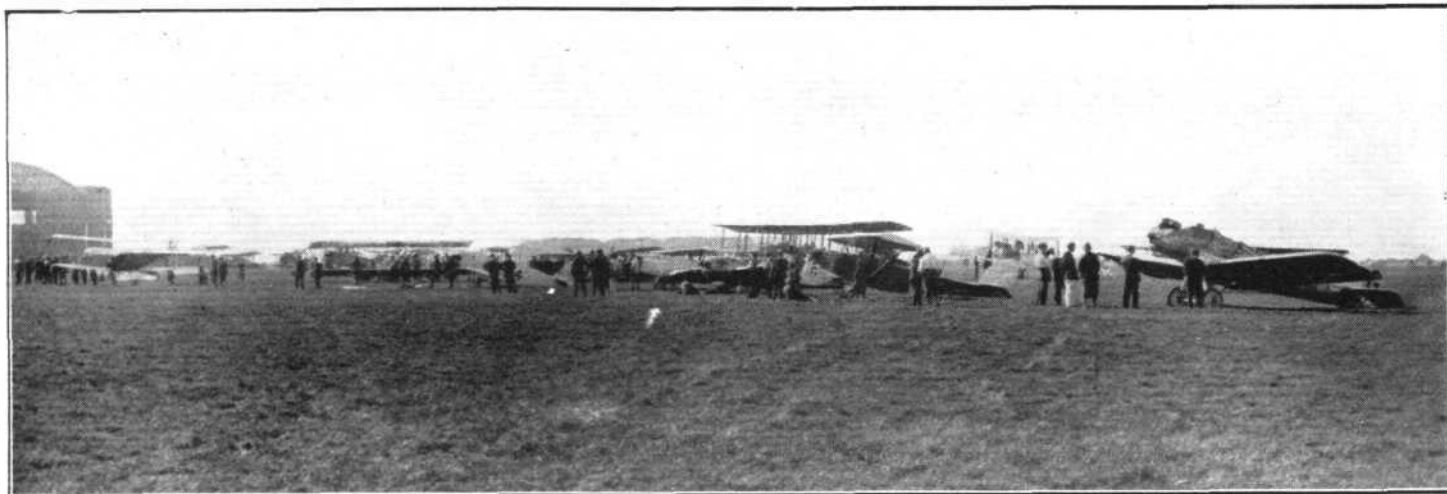
Saturday's racing was brought to a close by the holding of the Lypne Open Handicap, open to any aeroplane, for prizes totalling £100, presented by the Royal Aero Club. The course was one of 50 miles. The machines entered for this race and their handicap allowances were as follows: No. 10, the Avro "Avis," 22 mins. 43 secs.; No. 4, Farnborough "Cygnets,"

lead throughout the race. Second was the Parnall "Pixie," and third the Bristol "Brownie" single-seater.

This concluded a very excellent race meeting, certainly one of the best we have had for many years.

THE "DAILY MAIL" BANQUET AT LYPNE

ANOTHER Lypne meeting has passed into that form of hereafter commonly described as Limbo; and, strange to relate, the stewards of the meeting are still alive, though they carefully refrain from kicking. The meeting has not been



[“FLIGHT” Photograph]

A LIVELY SCENE AT LYPNE: Some of the machines which took part in Saturday's race lined up.

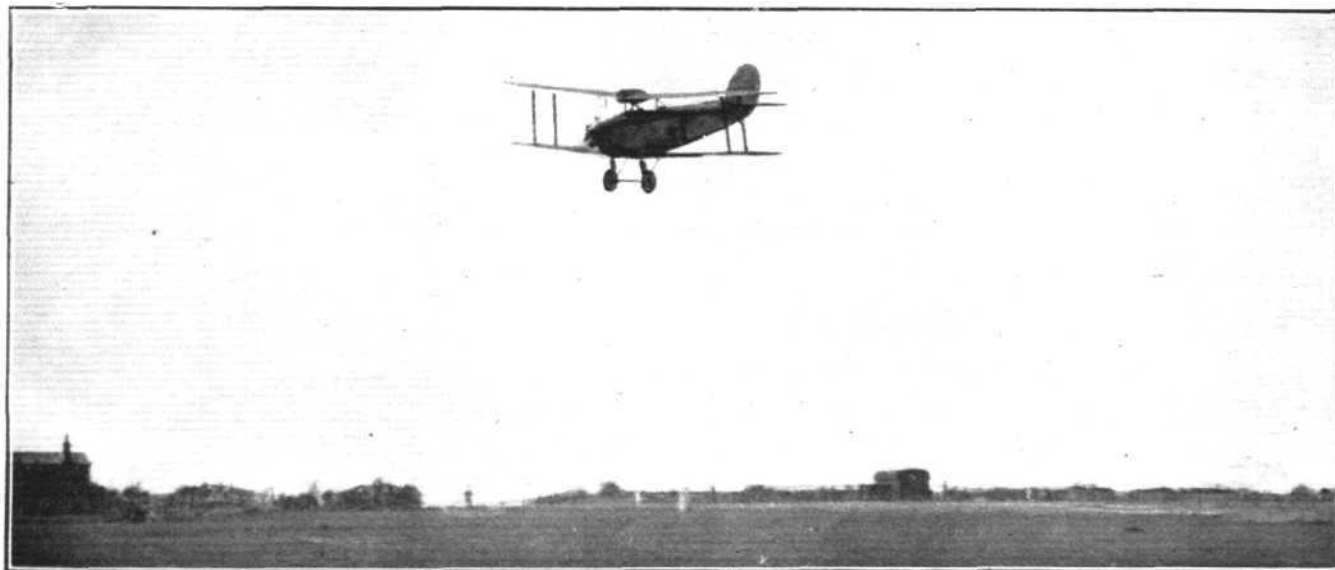
17 mins. 40 secs.; No. 14, Parnall "Pixie," 17 mins. 6 secs.; No. 12, the Cranwell biplane, 16 mins. 34 secs.; No. 15, the Short "Satellite," 16 mins. 34 secs.; G-EBJM, the Bristol "Brownie" single-seater, 16 mins. 2 secs.; No. 6, the Hawker "Cygnets," 13 mins. 9 secs.; G-EBMJ, the Short "Mussel," 12 mins. 17 secs.; G-EBHS, the R.A.E. "Hurricane," 11 mins. 52 secs.; G-EBCA, Dr. Whitehead Reid's Renault S.E.5, 10 mins. 10 secs.; No. 9, the Avro "Avian," 7 mins. 30 secs.; G-EBMO, D.H. "Moth," 7 mins. 11 secs.; No. 2, the "Moth" with "Genet" engine, 6 mins. 52 secs.; the Amiot biplane, 4 mins. 21 secs.; G-EACZ, the Sopwith "Swallow," 1 min. 9 secs.; two S.E.5's, G-EBPA and G-EBPD, the former owned and piloted by Mrs. Elliott-Lynn, scratch.

without its humours—in more than one sense of the word. And the Lypne tradition has been preserved, namely, that age must be served; while the promising youngsters are left by the wall (in this case represented by nine-acre fields) declaring, like Kipling's debutante,

"Just think, that she'll be eighty-one"

"When I am forty-nine."

But whatever happens to the competing machines, Lypne remains the greatest and most useful air conference of the year. All sorts and conditions of the aeronautical fraternity get together and live together. As a medium for focussing the air opinions of Great Britain, the Guildhall cannot hold a candle to the bar of the Hotel Imperial. There old friendships are renewed and new ones are made, and rivals of the aero-

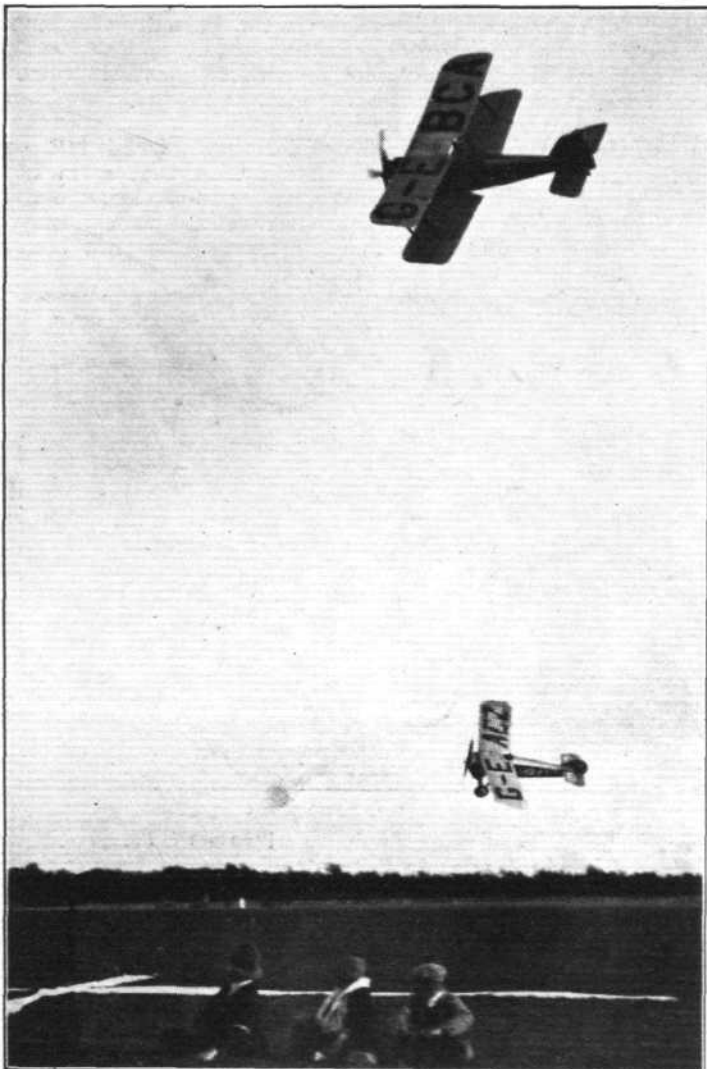


[“FLIGHT” Photograph]

Winning the Grosvenor Cup Race: Longton, on the Blackburn "Bluebird" with Armstrong-Siddeley "Genet" engine crossing the finishing line. His average speed was 84.95 m.p.h.

As Capt. Broad rounded the aerodrome turning point after completing his first lap, a single-seater fighter was slow-flying somewhat close to the turning point, and Broad did a rather alarming Immelman turn to avoid him, but righted his machine again and continued the race. The winner of this event was the Farnborough "Cygnets," which had kept his

drome become the best of boon companions; and even the stewards are almost forgiven. And again, as in past years, men say on the last day "We shall never have another Lypne meeting: there will be nothing to compete for next year." It would be a positive disaster if there never were another Lypne. Why, it is surely obvious that we must



[“FLIGHT” Photograph

Cornering in the Lympne Open Handicap. Below the Sopwith “Swallow” piloted by Mr. Watts, and above Dr. Whitehead Reid in an S.E.5.

have a contest between Autogyros and Pterodactyls with marks for the longest time taken to fly the triangular course, and the longest time taken to descend from 100 ft. on to a sixpence. Perhaps a special cup will be given to the pilot who succeeds in breaking an undercarriage. *Of course* we must have more Lympnes.

It was also in accordance with tradition that the meeting should end with a banquet. The proprietors of the *Daily Mail*, it was generally understood, invited us all as their guests to the banquet. Somehow or other (no one supposes it was the fault of the *Daily Mail*) it so happened that next morning when we paid our bills we found (certainly some of us found) that we had to pay for our dinner of the night before. But at any rate the champagne and cognac provided by the *Daily Mail* were much appreciated. The Privy Council was very much in evidence, for Lord Thomson of Cardington was in the chair and Sir Samuel Hoare was by his side.

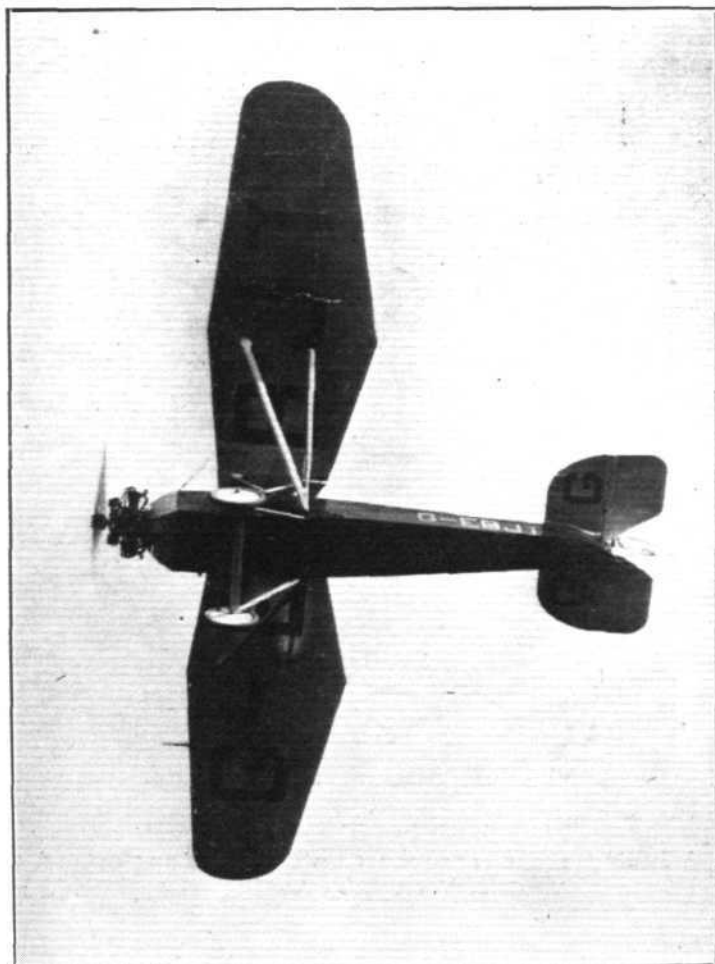
After the loyal toast, the chairman called on Sir Samuel Hoare, and the latter, describing himself tactfully as the Air Minister for the moment, expressed the thanks of everyone concerned to the proprietors of the *Daily Mail* for putting up prizes to the tune of £5,000. He recalled some of the previous prizes which that paper had given in order to encourage flying. First there was a prize for a model aeroplane in 1907, which was won by A. V. Roe. Two years later there was the prize for a flight across the Channel, won by Louis Bleriot; and then the prize won by “my old friend Brab” for flying the amazing distance of one circular mile. Coming to later years, there was the prize for an Atlantic flight, won by Alcock and Whitten Brown. As for the competition just ended, everyone would have his own opinion, influenced in some cases by whether he had lost or won. The three winners were all vintage machines of the very good year 1924. They had got through the needle eye of the Stewards’ gaze. Perhaps there had not been very much to appeal to the eye of the public; but the competition had at least produced one

very interesting new machine and one very promising engine. They had experienced the mixed grill of British weather, which had made British pilots the best in the world. He could only compare them to the best British jockeys. It was gratifying that they had got through the competition with no serious accident. The competition had shown that a light aeroplane could carry two persons and enough baggage for a comfortable week-end flying on about 40 miles to the gallon. Each of the Lympne meetings had led to a useful development. Sir Samuel sketched their history from the gliding week at Itford, and prophesied that we should see development as a result of the 1926 meeting. He hoped that they would soon get what the public needed, an aeroplane which was cheap, safe, comfortable, and swift.

Lady Maude Hoare then presented the prizes to the winners. This ceremony was enlivened by a claque, apparently from Farnborough way, who broadcast their sentiments in sten-torian unison. As the pilot of No. 4 went up for his prize, the claque became a farmyard and “chuck, chuck, chuckled” as though the next day were Easter Sunday. As Mr. Hinkler advanced blushing to receive the S.M.M. and T. prize, the claque loud speaker announced: “One, two; Sunlight soap.” As the pilot of the “Pixie” rose in his turn, the same loud speaker (following a good precedent) informed us: “One, two; Mr. Courtney is now walking across the room; over.” As he returned to his seat, we heard: “One two; magic hands; over.” Alas! we lost some of the pearls of wit. It may have been atmospherics, but the loud speaker confessed “articulation weak,” and left it at that.

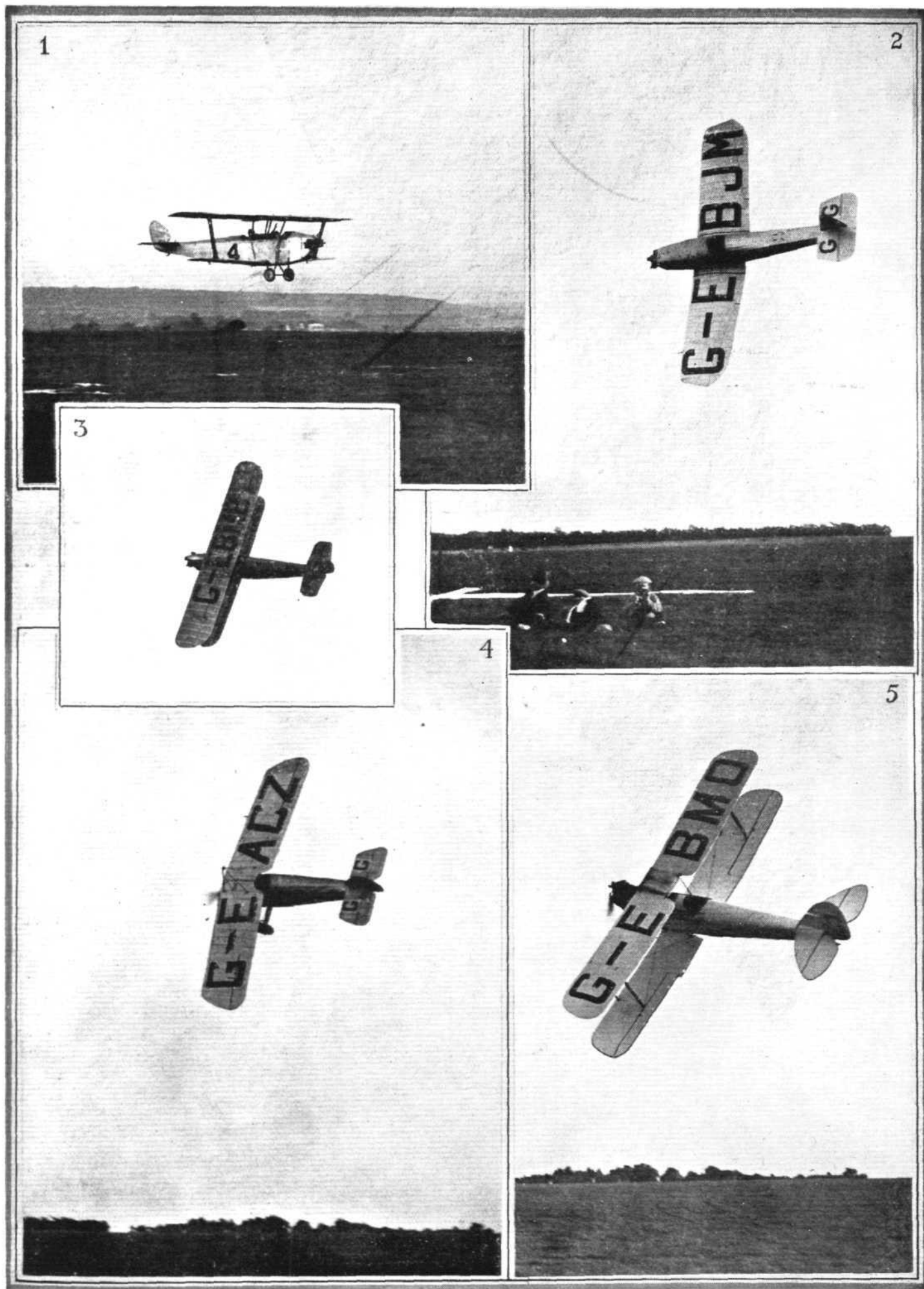
Mr. Goudie, a director of the *Daily Mail*, briefly returned thanks for the nice things said about “our little business.” He held out hopes of more to come in the way of financial assistance to flying. Good news that. We all are glad to know that *Daily Mail* cheques for £5,000 are a fuel which is commercially obtainable in bulk.

Sir Francis McClean then proposed a vote of thanks to Lord Thomson for taking the chair, and in reply His Lordship made a capital speech. He said that these meetings were laying the foundation of the air power of the British Empire. Speaking of “my distinguished predecessor and successor,” he said that the air has created a new atmosphere, and men of



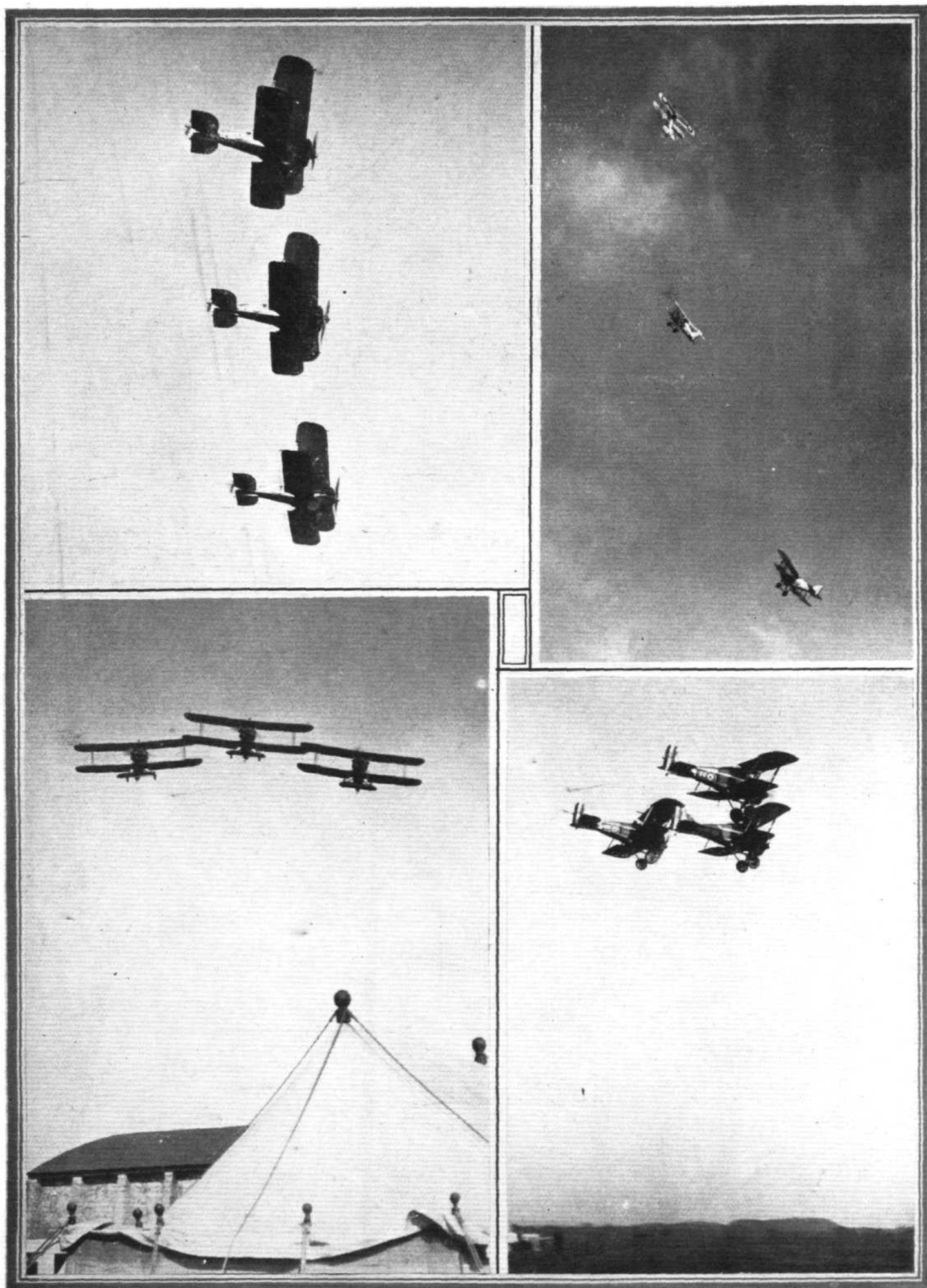
[“FLIGHT” Photograph

The Westland “Widgeon” with Armstrong-Siddeley “Genet” engine doing a vertical bank.

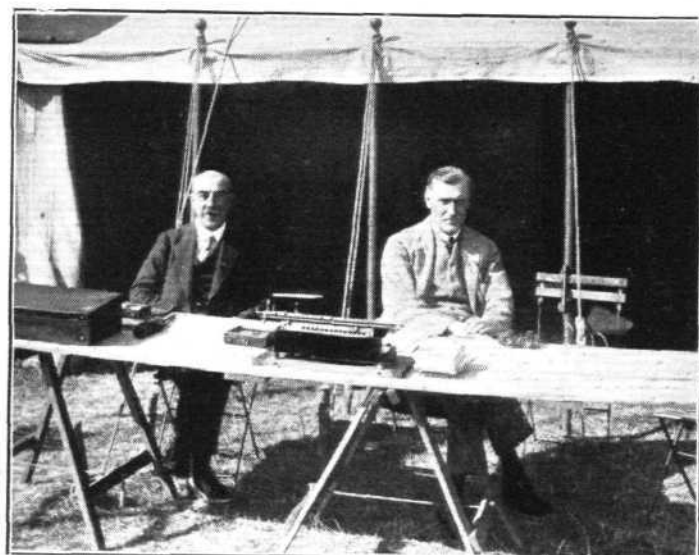
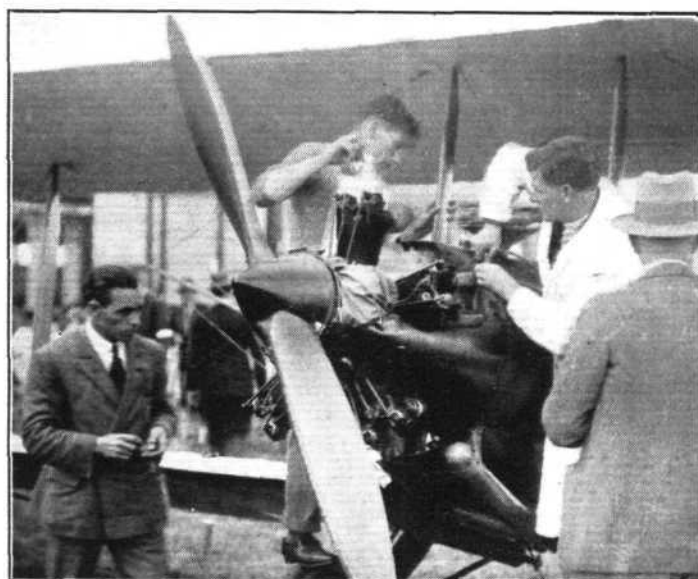


["FLIGHT" Photographs]

THE LYMPNE OPEN HANDICAP: 1. No. 4, the Farnborough "Cygnet," winning this event. 2. The single-seater Bristol "Brownie" in a sharp turn. 3. The Hawker "Cygnet" trying to beat its handicap. 4. The Sopwith "Swallow" wanting to know "Watts what." 5. The white de Havilland "Moth."



FORMATION FLYING EXTRAORDINARY: Daily visitors to Lompne during the light 'plane competition were "Grebes," "Woodcocks" and "Gamecocks," whose evolutions were generally admired. Our photographs show these machines in various formations.



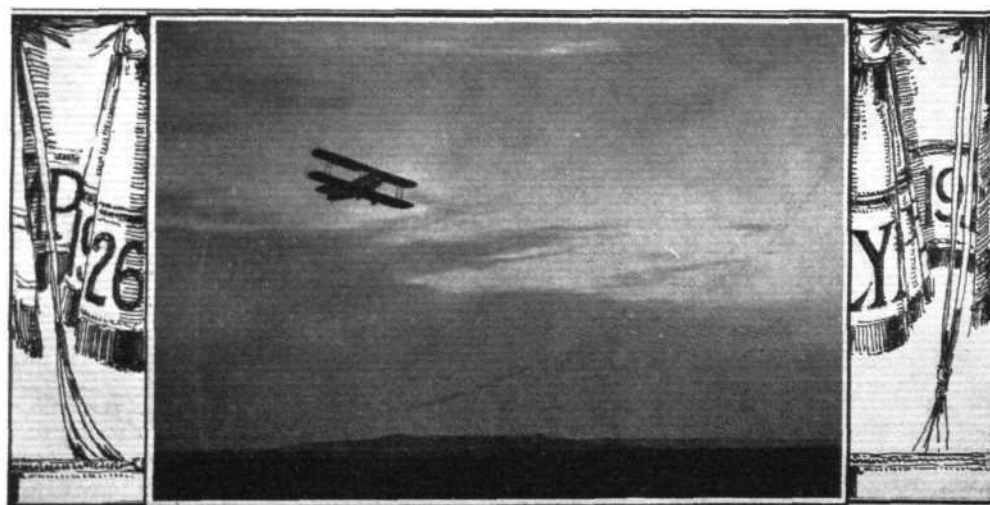
["FLIGHT" Photographs.

SOME PERSONAL TOUCHES : Top left, a very exalted "turning point": The Judge of the competition, Air-Commodore F. C. Halahan, M.C., C.B.E., D.S.O., M.V.O., accepts the somewhat risky duty of turning point observer in the Grosvenor Cup Race and Lympne Open Handicap. Top right, the daily toilette: Hinkler having the petrol tank of his Avro "Avis" put on board again after one of its many visits to Hythe. Bottom left. Friendly Rivalry: Captain Geoffrey de Havilland takes Mr. Roy Chadwick, Avro designer, for a flight in his "Moth," and bottom right, watching the split seconds: On the left, Mr. A. G. Reynolds, and on the right, Col. Lindsay Lloyd, official timekeepers during the competition.

the most diverse political opinions became, through the air, as one. He quoted Mahon on sea power, and added that air power must be based on the Air industry. Commercial flying was the basis of air power. He also said that to him a most hopeful sign was the presence at the aerodrome of a

number of bookmakers. The performances at the meeting had been real and serious, and had represented a combination of sport and business. Then, or a little later, everybody went to bed.

F. A. DE V. R.



LIGHT 'PLANE CLUB DOINGS

The Hampshire Aeroplane Club

REPORT for week ending September 15:—

Total flying time, 16 hrs. 10 mins.; instruction flying, 14 hrs.; passenger flying, 2 hrs. 10 mins.

The following members received instruction:—Mr. Heathcote, 1 hr. 35 mins.; Miss Home, 1 hr. 25 mins.; Messrs. Bumble, 1 hr. 15 mins.; Dobson, 1 hr. 25 mins.; Perfect, 55 mins.; Molony, 40 mins.; Everett, 45 mins.; Lieut. Graham, R.N., 35 mins.; Messrs. Dartnall, 30 mins.; Bishop, 25 mins.; Dickson, 25 mins.; Bound, 20 mins.; Fowler, 20 mins.; Courtney, 20 mins.; Rodger, 15 mins.; Sommer, 15 mins.; Kerry, 20 mins.; Keeping, 20 mins.; Bowen, 15 mins.; Fry, 15 mins.; Cooper, 15 mins.; Morley, 10 mins.; Shepherd, 20 mins.; Mansbridge, 20 mins.

The following members received passenger flights:—Miss Wyllie, Mrs. Haines, Miss Woodford, Mrs. Fry, Miss Harvey, Miss Heathcote, Miss West, Mr. Kennerly-Rumford.

Mr. O. E. Simmonds put in 45 mins. solo flying.

Lancashire Aero Club

REPORT for week ending September 17:—Typical Manchester weather has rendered flying difficult during the greater part of the period. Total time for week, 17 hrs. 10 mins., made up as follows:—

Dual, with Mr. Stack: Costa, 1 hr. 55 mins.; S. Smith, 1 hr. 30 mins.; Nelson, 1 hr. 10 mins.; Hughes, 1 hr. 10 min.; Birley, 1 hr.; Moss, 30 mins.; Dyson, 25 mins.; Hampson, 25 mins.; Woods, 20 mins.

Solo: Agar, 1 hr. 10 mins.; Goodfellow, 1 hr. 5 mins.; Pitman, 1 hr. 5 mins.; Williams, 50 mins.; Leete, 35 mins.; Michelson, 35 mins.; Lacayo, 30 mins.; Parker, 15 mins.; Hampson, 15 mins.

Joy rides with Messrs. Goodfellow, Scholes, and Stack: Miss Goodfellow, 25 mins.; Mrs. Thorpe, 20 mins.; Williams, 20 mins.

Tests occupied 1 hr. 30 mins. Machines in use, IR and MQ ("Moths"), and OK (Avro).

Between thirty and forty entries have been received for the competitive events of the club's second flying display, which starts at 2.30 p.m. prompt next Sunday, the 26th inst. The traffic and parking arrangements have been greatly improved and arrangements have been made to supply a limited number of luncheons for the benefit of spectators arriving early with their cars in order to make sure of a good position in the aerodrome car park.

We note with pleasure that Yorkshire intend to take back with them the

silver tankards for the inter-club relay race. This event will be flown in heats and a Lancashire-Yorkshire final would be very popular with the crowd. One has no doubt, however, that whoever wins them will have to fill them before being allowed to depart.

The Midland Aero Club, Ltd.

REPORT for week ending September 18:—The total flying time for the week was 13 hrs. 23 mins. The following members received flying instruction: H. Willis, J. Brinton, S. H. Smith, C. Burrows, H. Smith, O. L. Richards, A. Gibbons, H. Beamish, R. L. Jackson, E. J. Brighton.

The following members made solo flights: W. Swann, E. J. Brighton, G. Perry, R. L. Jackson, H. Willis, and C. L. Knox, all of whom are "A" pilots. Only one machine has been in use as EBLW is undergoing annual inspection for renewal of certificate of airworthiness.

The Newcastle-upon-Tyne Aero Club

REPORT for week ending September 19:—Total time for the week, 31 hrs. 55 mins., made up as follows: Dual, 21 hrs. 55 mins.; solo, 10 hrs. 10 mins.; passenger with Mr. Parkinson, 30 mins. All the above flying on LX. On two days during the week flying was impossible owing to strong winds.

The following members flew under instruction with Mr. Parkinson:—Sir Joseph Reed, Mrs. Marks, Miss Leathart, Messrs. H. Ellis, E. C. Kennedy, J. M. Kennedy, Matthews, Irving, Whitfield, Middleton, Somerville, Thirlwell, Charlton, Gilmore, Turnbull, Miesegaes, C. Thompson (advanced dual), Palmer, Bruce.

Solo: Mr. Baxter Ellis, with Mr. Keenan; Mr. H. N. Thompson, with Mr. E. Collins, Miss Crossley, Mr. T. Bell, Miss Bell.

Dr. Dixon, with Mr. T. T. Davidson, Mr. Percy, Mr. Mason, Dr. Toward, Mr. White, Mr. Smith, Mr. Charlton, Mrs. Bell, Miss Howard, Miss Atkinson, and Mr. J. Bell.

Mr. F. H. Phillips, with two passengers whose names have not yet been reported.

The following flew as passengers with Mr. Parkinson: Mr. Thompson and Mr. Bishop.

Both machines will be at the Lancashire Club's meeting on Sunday next. Some members had designs upon the four tankards, and are very much disappointed to learn that these will be collected by the Yorkshire Club.

Everyone wishes the Lancashire Club success with suitable weather.

CORRESPONDENCE

DOWN-WIND LOOPS.

[2146] I notice in your issue of September 16, in your account of the Newcastle Club's Meeting, you say that, "It is very gratifying, indeed, to find, . . ." that Captain Broad's down-wind loops were "fully appreciated by a very large proportion of those present."

I know that an extraordinary theory used to exist in the R.A.F. that a relative motion between the air and the earth had some mysterious influence on evolutions carried out entirely in the air. Their appearance when viewed from the moving (!) earth is certainly affected by the relative motion.

As there does not seem to be anything to "appreciate" in the appearance of a down-wind loop in preference to an up, cross, or no-wind loop, I take it that your contributor has fallen under the influence of this die-hard theory.

I respectfully suggest that this myth is the result of confused thought, and that it would be better if it were exploded instead of being "appreciated" by our fellow enthusiasts of Northumbria.

As distinct from a relative motion between the earth and air, it would be of interest to know whether, in the case of a modern high performance fighter doing large loops, any

effect is noticeable due to any relative motion between different air strata through which it passes (*i.e.*, variation of wind strength—or even direction—with height). Perhaps some of your readers can throw light on this.

W. E. GRAY.

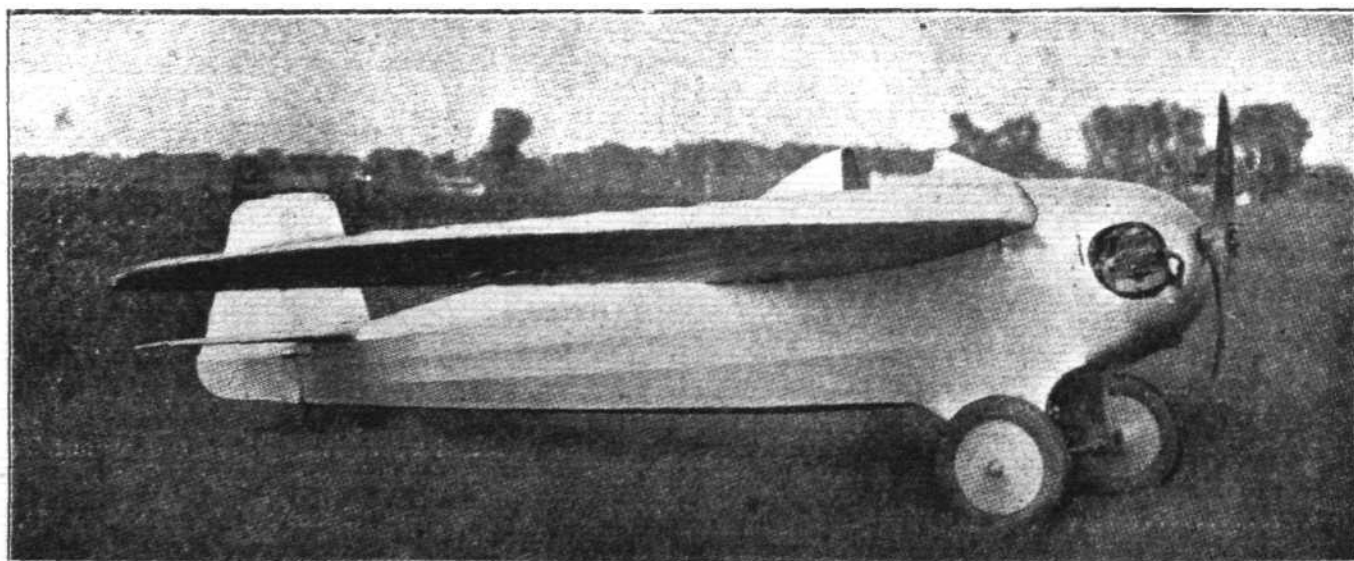
West Ealing,

September 21, 1926.

R.A.F. Boxing

THE following fixtures have been arranged for the R.A.F. Boxing Association:—October 22: *v.* Household Brigade, at Chelsea Barracks; October 27-28: The Sir Charles Wakefield (Novices) Team Tournament, at Henlow; November 5: *v.* Belsize B.C., at Uxbridge; November 18: *v.* Cambridge University, at Cambridge; January 6: *v.* Civil Service, in London; February 10: *v.* Oxford University, at Halton; March 2 and 3: R.A.F. Individual Championships, at Halton.

The R.A.F. Team will also take part in the inter-services four-sided tournament for Lord Desborough's trophy at the Stadium Club on December 9. Squadron-Leader G. C. Anne will continue to act as the honorary secretary of the R.A.F. Boxing Association.



A BRISTOL WIN IN AMERICA: The Heath "Tomboy" light monoplane, fitted with a Bristol "Cherub" engine, which won the "Dayton Daily News" Trophy, one of the Light 'Plane events in the National Air Races at Philadelphia on September 7.

ALAN COBHAM'S FLIGHT HOME

As reported in last week's *FLIGHT*, Mr. Alan Cobham and his two companions, Sergt. Ward and Mr. Capel, were reported seen flying *en route* for Rangoon on September 15 (not September 14, as previously stated), after several days without any news regarding their safety. They landed safely at Rangoon early that afternoon, and were accorded an extremely hearty welcome.

The story of Mr. Cobham's "hold-up" is one full of thrills and adventures, and will make interesting and historic reading when it comes to be written or told in full. When they left Penang on September 8—after a speedy seven days' flying from Australia—they were flying on a direct compass course over open sea and desert islands *en route* for Victoria Point. Then they ran into very severe rainstorms, which rendered it impossible to see more than a few yards ahead.

Mr. Cobham, therefore, decided to come down, and landed on the leeward side of a small island 40 miles from shore. A sheltered cove was found and here they took refuge, making fast the D.H.50J (Siddley "Jaguar") seaplane to a palm tree. After a while the downpour of rain eased, and they decided to push on a bit further. Taking off from the rollers proved to be no easy task, and the Short all-metal floats received severe punishment, but withstood it well. Eventually they reached a small Siamese village located up a sheltered creek, called Tanoon, which Mr. Cobham had "ear-marked" on the outward journey.

Here they made a safe landing, glad to be in touch with civilisation once more, and received hearty welcome and help from the inhabitants. On beaching and examining the machine it was found that certain damage had resulted from the rough sea and rain, so while Ward and Capel rendered first aid, Mr. Cobham motored to the nearest telegraph station (20 miles) to send news to Rangoon.

That evening the weather cleared somewhat, and the machine was launched and moored to a safe anchorage for the night. Meanwhile the Secretary of His Highness Prince Sridhedej, Lord Lieutenant of the district, arrived with presents of English tinned food, whisky, cigarettes, etc., which kindness was very much appreciated. The rain

continued throughout the night, and in the morning (September 9) the monsoon broke out with increased fury and continued so until late in the afternoon, when it eased sufficiently for them to make a dash for Victoria Point.

Proceeding from Victoria Point early the following morning, they took off in the hope of reaching Rangoon ahead of the bad weather coming up behind. However, they only covered 40 miles and then flew into the "arms" of the worst rainstorms they had so far experienced. There was nothing for it, therefore, but to turn back, and with the greatest difficulty—for there was bad weather behind as well—they managed to fight their way back to Victoria Point. They landed safely, just as a terrific downpour fell, which completely hid the seaplane from view when they at last got ashore.

As previously stated, there is no telegraph, telephone or wireless now at Victoria Point, and so Mr. Cobham was quite unable to let the outside world know of his position, and as, after what they had experienced during the journey from Penang, they had decided not to attempt to proceed further until there was a definite break in the weather, the enforced stay at Victoria Point explains the several days' silence and anxiety experienced last week.

For five days they were held up at Victoria Point, and it was not until September 15 that conditions settled sufficiently to enable them to proceed to Rangoon—and even then only the first 150 miles was flown in fair weather, the remaining 400 miles being covered through a continuous downpour.

At Rangoon some more bags of rain, etc., arrived and the journey home was once more delayed, and they did not leave for Calcutta until September 18. When they arrived at Akyab, however, the weather was so bad that it was decided not to proceed. Conditions improved a little on September 19, and then they flew on to Calcutta, but once again weather reports were adverse to continuing, so they did not leave Calcutta until September 21 *en route* for Allahabad.

Note.—The Institute of Aeronautical Engineers' Dinner in honour of Mr. Cobham has been postponed from Sept. 30 to a date to be fixed later.

THE ROYAL AIR FORCE

London Gazette, September 17.

General Duties Branch

The follg. Pilot Officers are promoted to the rank of Flying Officer:—
L. R. Mizen (April 15); R. G. M. Hill (Sec. Lt., London Regt., T.A.) (May 15); D. C. Sherman, E. G. D. Stewart, M.C., T. P. F. P. Fagan (Aug. 6); A. J. Holmes, C. P. Vines (Aug. 17); R. D. Adams (Sept. 17).

Flying Officer S. H. Hardy is placed on half-pay, Scale B. (Sept. 16).

The follg. are transferred to the Reserve:—

Class A

Squadron Leader.—C. A. Rea, A.F.C. (Sept. 12).

Flight Lts.—W. W. McConnachie, T. Rose, D.F.C., R. A. Vosper (Sept. 12); A. M. Blake, A.F.C., P. H. Davy (Sept. 16).

Flying Officers.—H. A. Boniface, R. G. Mullette, H. E. F. Saunders (Sept. 12); J. V. Medcalf, P. L. Sant (Sept. 16).

Class B

Flight Lts.—R. C. Bryant, W. H. Oakley, M.B.E. (Sept. 12); D. K. Cameron (Sept. 16).

Flying Officers.—J. L. Miles, H. W. Nicholl (Sept. 12).

Class C

Flight Lts.—B. C. Adamson, D. W. King (Sept. 12); C. W. Bailey, F. R. P. Dexter (Sept. 16).

Flying Officers.—H. E. Kirk, D.C.M. (Sept. 12); E. J. Moule (Sept. 16).

Stores Branch

Flying Officer W. F. Langdon is granted a permanent commission in this rank with effect from November 24, 1925, on completion of probationary service.

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Wing Commander H. R. Nicholl, O.B.E., to No. 70 Squadron, Iraq, pending taking over command, 3.9.26.

Squadron Leader L. H. Slater, O.B.E., D.S.C., D.F.C., to Marine Aircraft Experimental Establt., Felixstowe, 6.9.26.

Flight Lieutenant W. G. Meggitt, M.C., to Central Flying School, Upavon, 16.8.26.

Flying Officers: B. S. Brice, A.F.C., and H. T. Satterford, to Home Aircraft Depot, Henlow, 1.9.26. T. J. Desmond, to Reception Depot, West Drayton, 6.9.26.

Flying Officers: E. H. Fielden, to Station H.Q., Duxford, 13.9.26. B. A. Davy, to R.A.F. Depot, Uxbridge, on transfer to Home Establt., 20.8.26. L. W. Mercer, to R.A.F. Depot, Uxbridge, on transfer to Home Establt., 1.9.26. F. V. Beamish, to Central Flying School, Upavon, on transfer to Home Establt., 14.9.26.

vice; Squadron Leader W. H. G. Maton, M.B.E., is placed on the retired list (Sept. 11).

The follg. are transferred to the Reserve (Sept. 12):—

Class B

Flying Officer.—W. A. Kyte.

Class C

Squadron Leader.—H. G. Etheridge.

Flying Officers.—H. D. Fletcher, W. B. Francis, H. C. Haywood-Gibbons, E. W. Husband, J. B. Slater, J. S. Viner.

Accountant Branch

The follg. Flying Officers are granted permanent commissions in this rank (Sept. 15):—E. C. Green, J. H. S. Richards.

Pilot Officer on probation F. Rigby is confirmed in rank and promoted to the rank of Flying Officer (Aug. 10); Flying Officer A. H. Scaife is placed on the retired list on account of ill-health (Sept. 15).

Medical Branch

Flying Officer A. Harvey, M.B., is granted a permanent commission in this rank (Sept. 15); J. Hutchison, M.B., is granted a short service commission as a Flying Officer for three years on the active list with effect from and with seniority of Aug. 24; Flying Officer F. P. Schofield, M.B., is promoted to the rank of Flight Lt. (Sept. 15); Flying Officer C. J. MacQuillan, M.B., B.A., is transferred to the Reserve, Class D.2 (Sept. 15).

Reserve of Air Force Officers

D. H. B. Clark is granted a commission in Class A.A., General Duties Branch, as a Pilot Officer on probation (Aug. 30); Flight Lt. D. Le Bas is transferred from Class D.2 to Class D.1 (Aug. 29).

Pilot Officers.—J. M. Hunter and G. L. G. Richmond, to No. 2 Flying Training School, Digby (13.9.26).

Pilot Officers.—The following Pilot Officers are all posted on appointment to Short Service Commissions (on probation), with effect from September 1, 1926:—L. T. Carruthers, T. H. Downes, and A. D. Vigors, to No. 9 Squadron, Manston; J. G. Elton and L. Newcombe, to No. 11 Squadron, Netheravon; D. L. Maclean, G. J. Powell, and H. N. C. Williams, to No. 58 Squadron, Worthy Down; J. F. Moir, R. S. Munday, and G. A. Robinson, to No. 99 Squadron, Bircham Newton.

Medical Branch

Flight Lieutenant A. E. Jenkins, to Station H.Q., Duxford, 28.8.26.

Flight Lieutenant (Q.Mstr., Medical) H. Steele, to R.A.F. Officers' Hospital, Uxbridge, 12.9.26.

Flight Lieutenant (Q.Mstr., Medical) D. Breen, to R.A.F. Hospital, Halton, on appointment to a Permanent Commission, 1.9.26.

SOCIETY OF MODEL AERONAUTICAL ENGINEERS

On Saturday, September 11, the Model Engineer No. 2 Cup Competition took place at the Sudbury ground. Weather was bright but a gusty wind prevailed. This competition was for single-screw Farman type models, and considerable ingenuity was shown in the design of this year's machines. Points were awarded on the basis—best duration $\times \sqrt{\text{loading}}$.

The result was as follows:—

	Weight.	$\sqrt{\text{loading.}}$	Best Duration.	Points.
	ozs.		secs.	
1st, T. H. Newell ..	9	3	24 $\frac{1}{2}$	71
2nd, R. N. Bullock ..	12	2.7	25 $\frac{1}{2}$	67
D. A. Pavely ..	12 $\frac{1}{2}$	2.9	14 $\frac{1}{2}$	41
F. de P. Green ..	23 $\frac{1}{2}$	3.15	7	22

The cup and prizes were kindly given away by Miss A. Green. A considerable amount of good flying was done with other types of machine by various members, of whom there were 15 present. It is hoped that all members will make an effort to be present at some time during the Model Engineer Exhibition now in progress (September 17 to 25) where the S.M.A.E. is having its customary exhibit.

Enquiries should be addressed to 58, Norton Road, Wembley.

B. K. JOHNSON,
Hon. Secretary.

New York-Paris Flight Tragedy

THE attempt to fly from New York to Paris in a Sikorsky S.35, by Captain Fonck started, and ended in disaster, on September 21. After several delays in starting—during which Captain Fonck was urged by Major Weiss, French Commandant at Le Bourget, to "start at any cost"—the departure was eventually fixed for sunrise, on September 21. With Captain Fonck were Lieut. Curtin, U.S.N. (second pilot and navigator), M. Clavier (the French wireless operator), and M. Islamoff (mechanic). The huge three-engined machine (Gnome-Rhone "Jupiters"), with about seven tons of fuel on board, started off at 6.36 a.m., and two minutes later, after having barely left the ground, it crashed, and burst into flames. Fonck and Curtin were thrown clear, escaping with minor injuries, but the other two occupants were trapped in the fuselage and were burned to death. At the time of writing, full details of the disaster have not been received, but we expect to have these in our next issue.

R.A.F. Cairo-Aden Flight

A FLIGHT of Vickers "Victoria" aircraft, under the command of Air Commodore C. R. Samson, C.M.G., D.S.O., A.F.C., Chief Staff Officer, Middle East Command, Royal Air Force, proceeded on September 15 from the Royal Air Force station at Heliopolis, Cairo, on a long-distance cruise to Aden. The flight is one of a series of extended cruises that are being carried out by the Royal Air Force to test air route arrangements and to gain service experience with post-war types of aircraft over routes not regularly flown over. The itinerary for the outward flight is Aswan, Atbara, Port Sudan, Massowa, and thence across the Red Sea to Aden. The return journey will be made by way of Khartoum and Wadi Halfa. The total distance to be covered is approximately 4,500 miles. The Vickers "Victoria" aircraft is a 25-seater troop carrier fitted with two Napier "Lion" engines.

Air Mails in Canada

FOR some time past there has been a fast aerial mail service to the Red Lake mining field from Hudson, Ontario. Now the postal authorities announce that permission has been granted to the Patricia Air Ways and Exploration, Ltd., operating an air service between Sioux Lookout and the Woman Lake and Birch Lake mining districts to convey such mail as is offered for conveyance by this service. The three newest of Ontario's gold camps are thus afforded the most modern postal service.

A Berlin-Madrid Air Service

THE Deutsche Luft Hansa—the big German air service combine—has opened negotiations with the Spanish authorities in connection with a scheme for extending the existing air service between Berlin and Marseilles to Madrid, via Barcelona. It is probable that a Spanish air transport company will be formed, which will operate the new extension in conjunction with the Luft Hansa. The Marseilles-Barcelona section will probably be operated with Dornier Wal flying boats, and the remaining section to Madrid with Junkers G.23 three-engined monoplanes. At present the Berlin-Stuttgart-Zurich-Marseilles service is run by three companies—Luft Hansa, Basler Luftverkehrsgesellschaft, and the French Air Union.

SIDEWINDS

WE have been informed that the rapidly increasing demand for "Castrol" from all parts of the world has necessitated the establishment of new branches of C. C. Wakefield & Co., Ltd., at Toronto, Canada, and at Rio de Janeiro, Brazil. These branches, together with those already founded at Bombay, Karachi, Calcutta, Penang, New York, Johannesburg, Buenos Aires and Melbourne, form a world-wide distributive organisation which justifies their slogan "Castrol—the Oil that circulates everywhere!"

"DOPED with Cellon" must be recorded in the case of all three prize-winners in the Lympne light 'plane competition just closed, and it may be of special interest to note that the R.A.E. "Cygnets," which finished second, was wearing the same "suit of clothes" as that obtained from the famous Richmond House of Cellon in 1924. Need we say more?

WHILE on the subject of Lympne, it may be mentioned that "K.L.G." sparking plugs not only shared the honours of first, second, and third prize-winners, but were, as far as we could ascertain, "in the running" with all the other competitors!

PUBLICATIONS RECEIVED

Aeronautical Research Committee Reports and Memoranda. No. 951 (Ae. 170).—An investigation of the Air-Flow Pattern in the Wake of an Aerofoil of Finite Span. By A. Fage and L. F. G. Simmons. March, 1925. Price 1s. net. No. 997. (Ae. 209).—The distribution of Pressure over a Biplane with Wings of Unequal Chord and Span. By H. B. Irving and A. S. Batson. December, 1925. Price 1s. net. No. 1024 (M. 40).—Some Further Experiments on Single Crystals of Aluminium Employing Reversed Direct Stresses. By H. J. Gough, D. Hanson and S. J. Wright. January, 1926. Price 9d. net. H.M. Stationery Office, Kingsway, London, W.C.2.

Technical Report of the Aeronautical Research Committee for the year 1924-25. Vol. 1.—Aeroplanes (Model and Full Scale); Vol. 2.—Airscrews, engines, materials, &c. H.M. Stationery Office, Kingsway, London, W.C.2. Price 17s. 6d. each, net.

British Standard Specification for Brazing Solder (Grades A and B). No. 263, 1926.—British Engineering Standards Association, July, 1926. Crosby Lockwood & Son, 7, Stationers' Hall Court, London, E.C. Price 1s. net. Post free, 1s. 2d.

Catalogue

"G 24."—The Junkers 3-engined Commercial Monoplane, and its operations in various parts of the World, described and illustrated.

AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

APPLIED FOR IN 1925

Published September 23, 1926

13,710. U. ANTONI. Aeroplane wings. (234,525.)

APPLIED FOR IN 1926

Published September 23, 1926

12,306. P. H. VAN WIENEN. Hydroplanes. (257,539.)

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